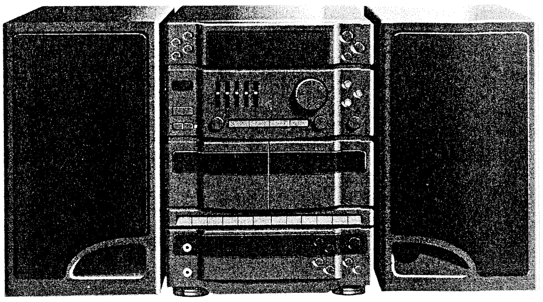
Mini System FW2014/22

Service
Service
Service



Service Manual

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"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

(S) Varing!

Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

(SF) Varo!

Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

CLASS 1
LASER PRODUCT
3122 110 03420

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CONNECTIONS AND CONTROLS

1	Power Switch		S815
2	Infra Red Sensor		IR800
3	Graphic Equalizer		VR651-VR655 VR651' - VR655'
4	Timer Control		S813, S814 S816, S817
5	Display		FL800
6	Mono/Stereo Switch		S810
	Tuning Up/Down		S811, S812
7	Volume Control/Indicator		VR600/LD600
8	DSP selector	Hall/indicator	S808/LD802
		Simulate/Indicator	S807/LD803
		Theatre/Indicator	S809/LD801
		DSP level	VR801
9	Balance Control		VR802
10	Function selector		S802 - 805

11	Deck 2 Play/Record	
12	Deck 2 Control	
13	CD Control	S818 - S824
14	CD Tray	
15	Headphone	J101
16	Mic/Mix	J102
17	Deck 1 Control	
18	Deck 1 Playback	
19	DBB Control	VR800
20	Dolby NR On/Off	S800
21	High speed Dubbing	S801
A	AM Loop Antenna Socket	341
B	FM Antenna Socket	341
C	Loop Antenna Holder	219
D	AC Mains cord	
E	Aux. Input Socket	J100
F	Speaker Socket	SP550

ESD

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

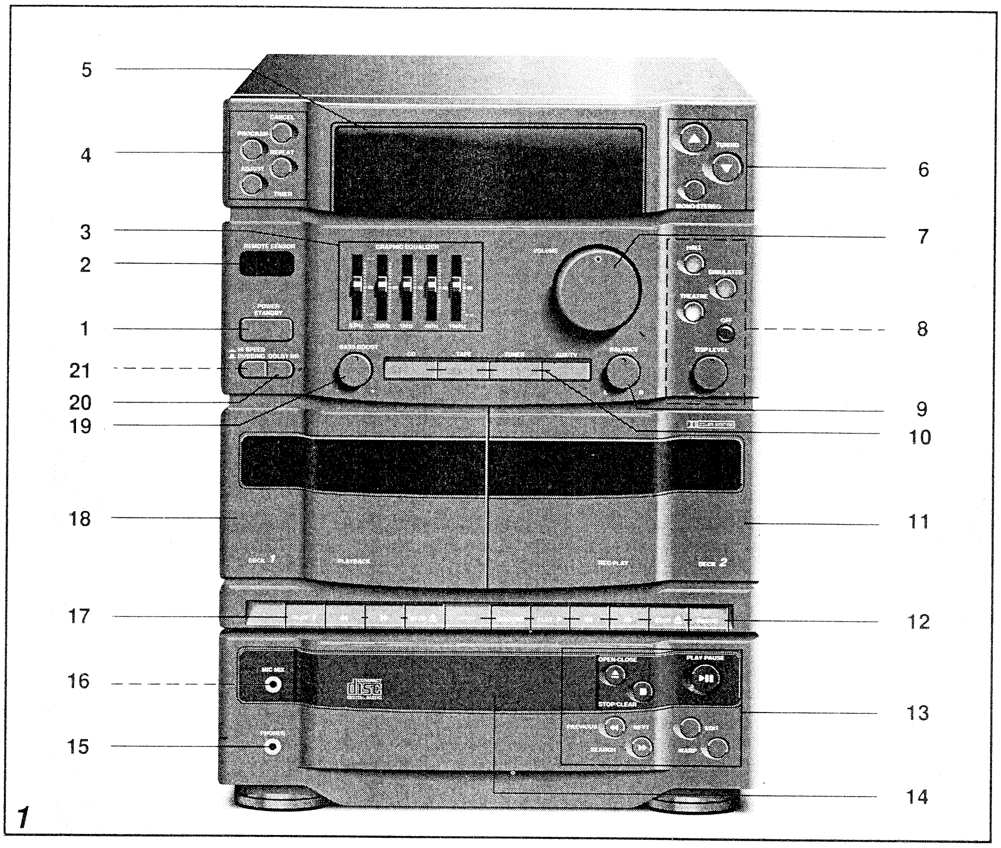
Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.


5
4
3
2
1
21
20
19
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17
16
15
6
7
8
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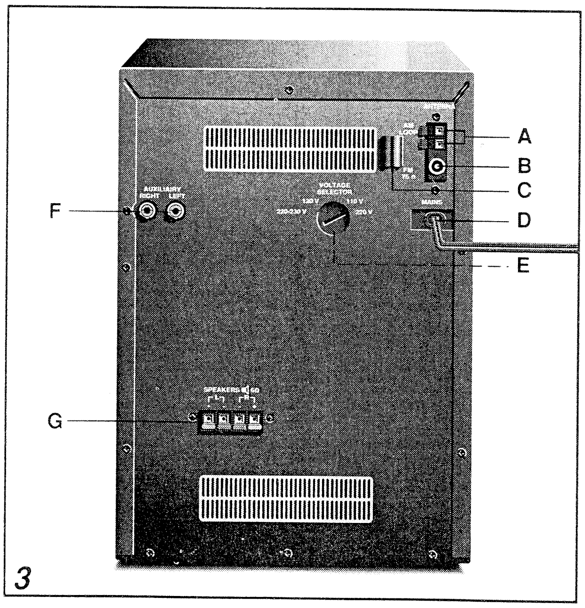
10
11
12
13
14

1



3

SPECIFICATIONS

GENERAL

Mains voltage	220V
Mains frequency	50Hz
Power consumption	85W max.
Dimension centre unit	225 x 302 x 260mm

TUNER : FM SECTION

Tuning range	87.5MHz - 108MHz
Tuning grid	50kHz
IF frequency	10.7MHz
Sensitivity at 26dB S/N	<13µV
Selectivity at 800kHz bandwidth	>40dB
IF rejection	>60dB
Image rejection	>40dB

TUNER : AM SECTION

Tuning range	MW	522kHz - 1602kHz
	LW	144kHz - 290kHz
Tuning grid		9kHz
IF frequency		450kHz
Sensitivity at 26dB S/N	MW	<72dB/m
	LW	<79dB/m
Selectivity at 18kHz bandwidth	MW	>24dB
	LW	>28dB
IF rejection	MW	>56dB
	LW	>45dB
Image rejection	MW	>30dB
	LW	>28dB

AMPLIFIER

Output power at 10% distortion	Mains	2 x 30W -1dB
Speaker impedance		2 X 6Ω
Frequency response within±3dB		40Hz - 20kHz
Equalizer control		-8dB to +8dB
Dynamic bass boost		±3dB at 100Hz
Headphone output at 32Ω		25mW
Input sensitivity	Aux	300mV

CASSETTE RECORDER

Number of track		2 x 2 stereo
Tape speed		4.76 cm/sec ± 2%
		2 x 4.76 cm/sec
Wow and flutter		<0.4%
Recording playback frequency response within ±6dB		80-10kHz (Normal)
		80-10kHz (Chrome)
Signal to noise ratio	Dolby off	>42dB (Normal)
		>42dB (Chrome)
	Dolby on	>53dB (Normal)
		>53dB (Chrome)

COMPACT DISC

Frequency response within ±2dB	20Hz - 20 kHz
Signal/Noise ratio	>>85dB
Distortion at 1kHz	<0.3%
Channel separation at 1kHz	>60dB

SET DISASSEMBLY DRAWING

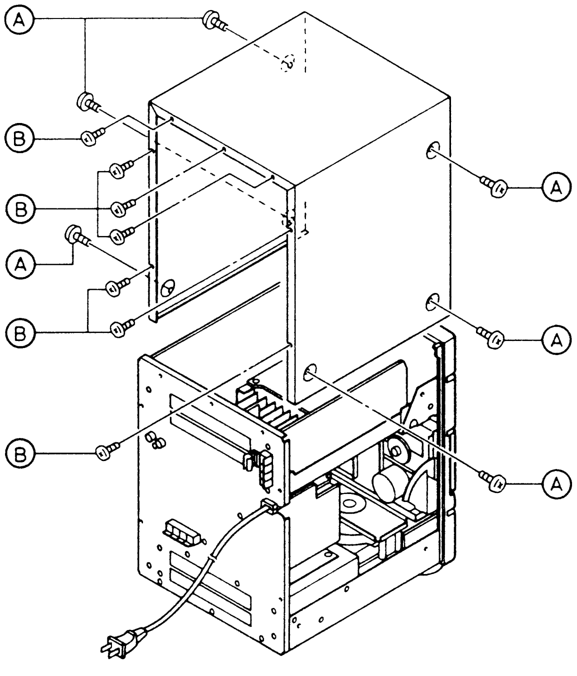


Figure 1

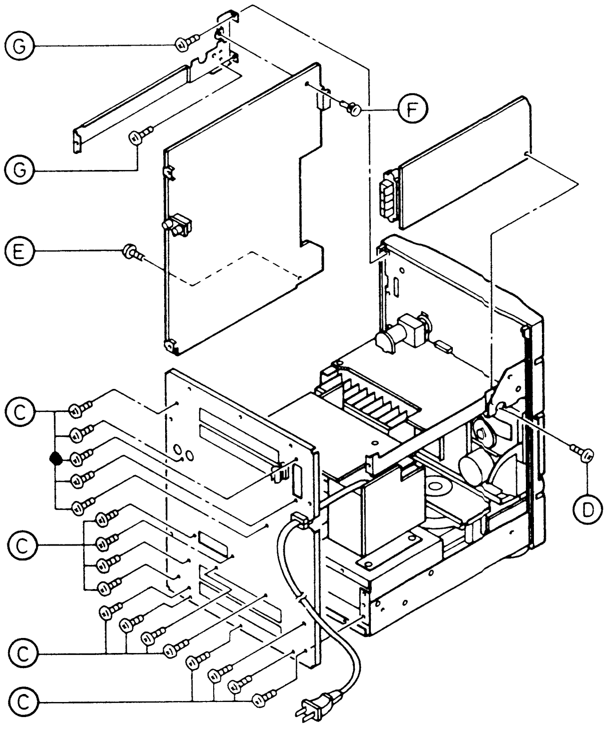


Figure 2

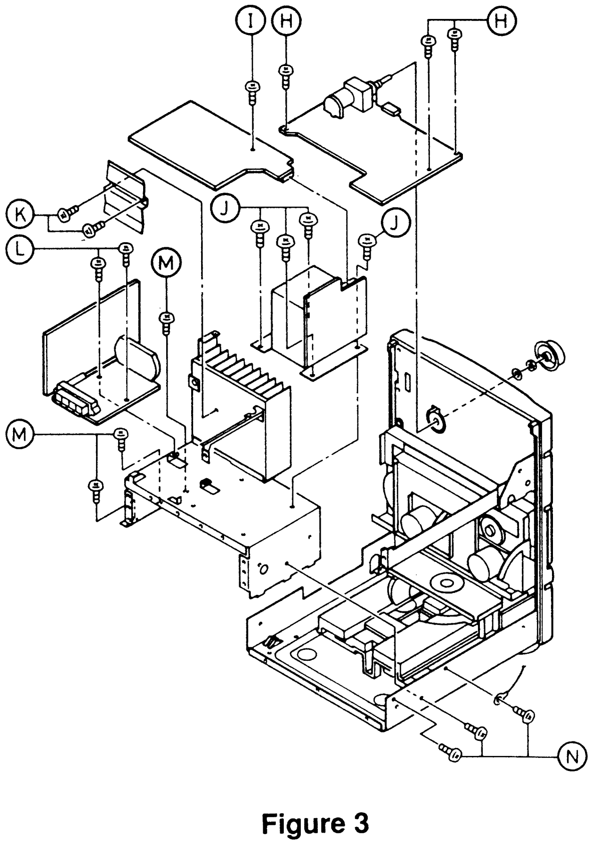
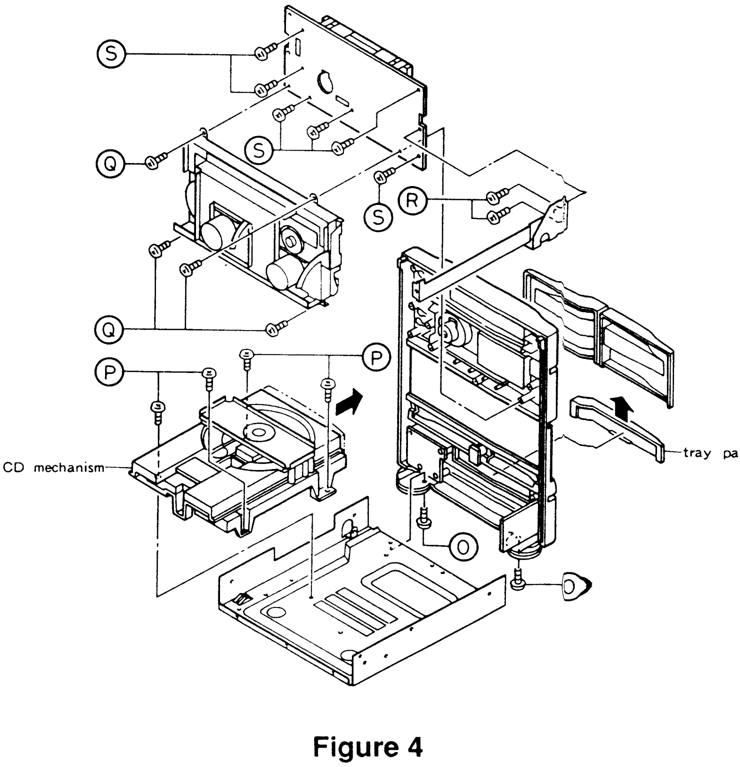


Figure 3



Ⓢ
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Ⓟ
Ⓟ
CD mechanism
tray panel
Ⓞ
Ⓞ

Figure 4

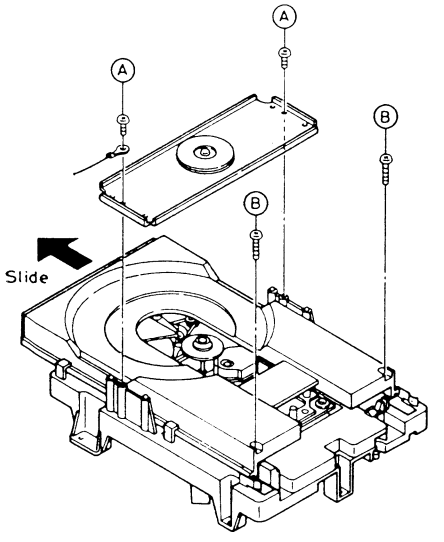


Figure 5

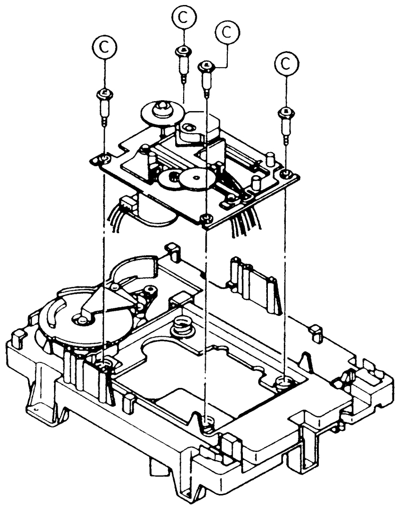


Figure 6

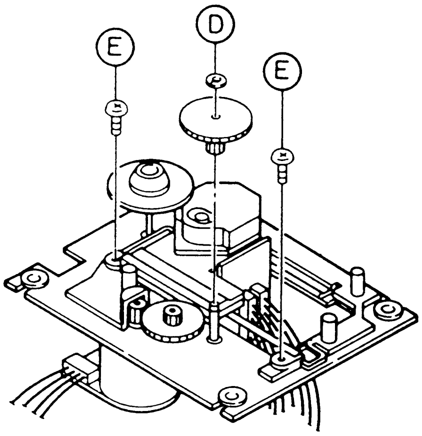


Figure 7

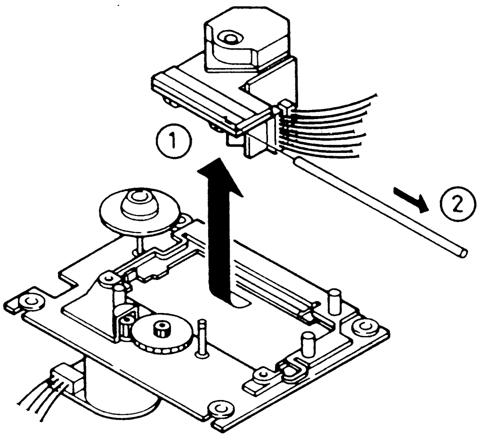


Figure 8

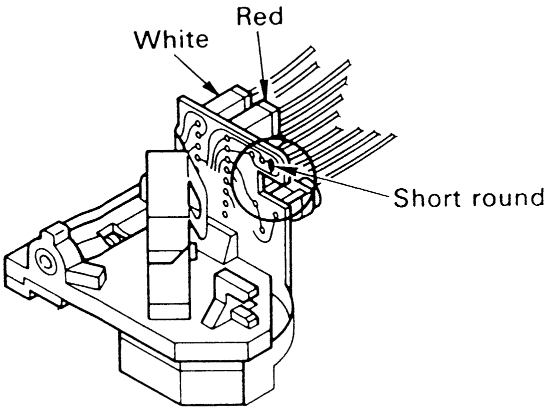
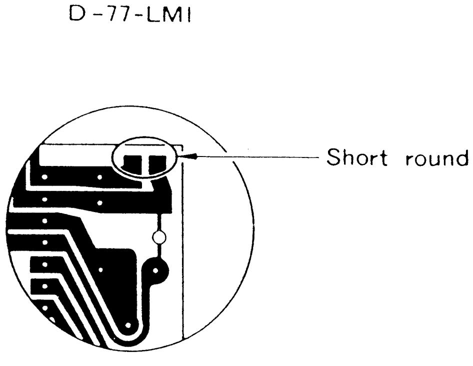

Red
White
Short round

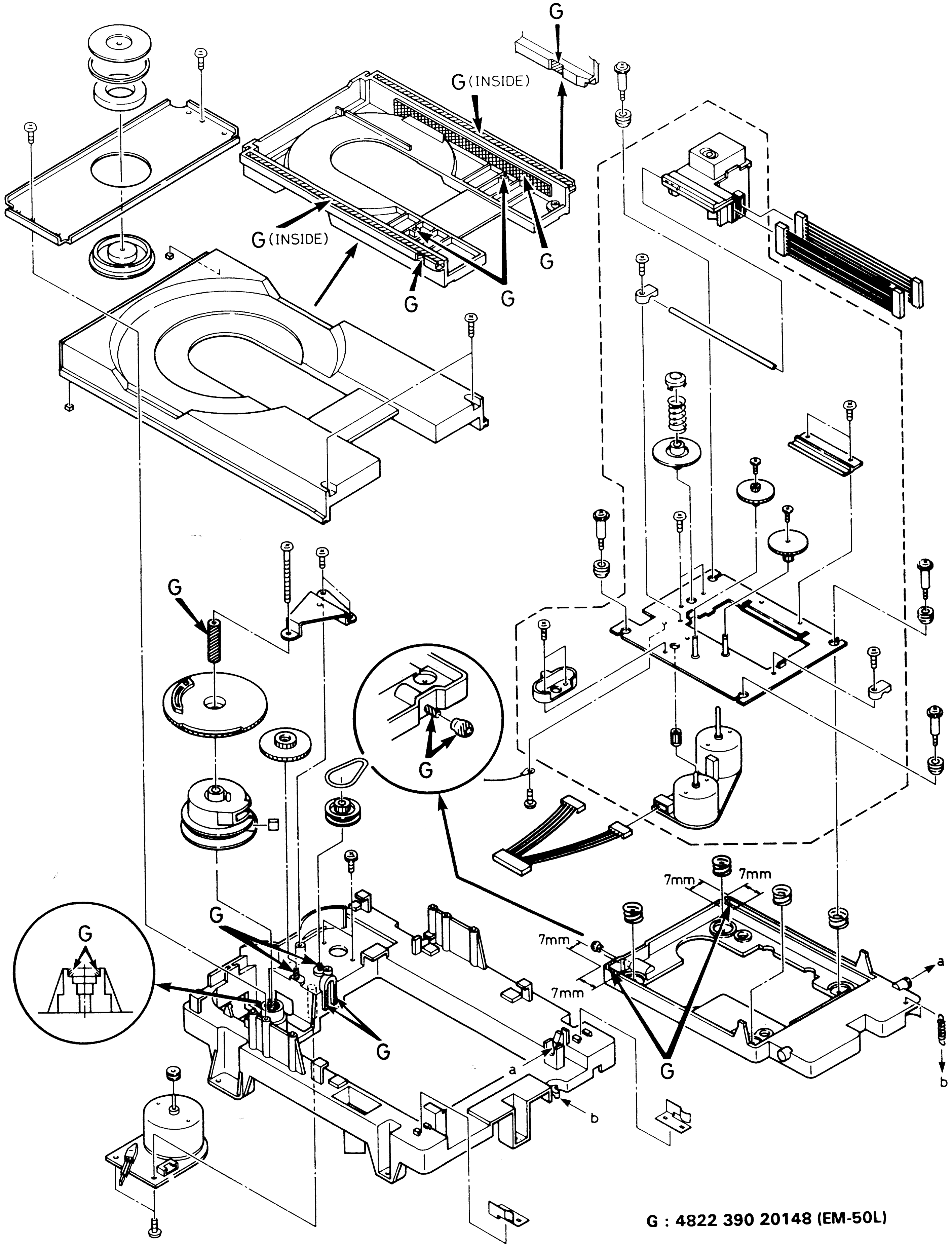
Figure 9


D-77-LMI
Short round

Desolder and remove the shorting tab after connector is assembled.

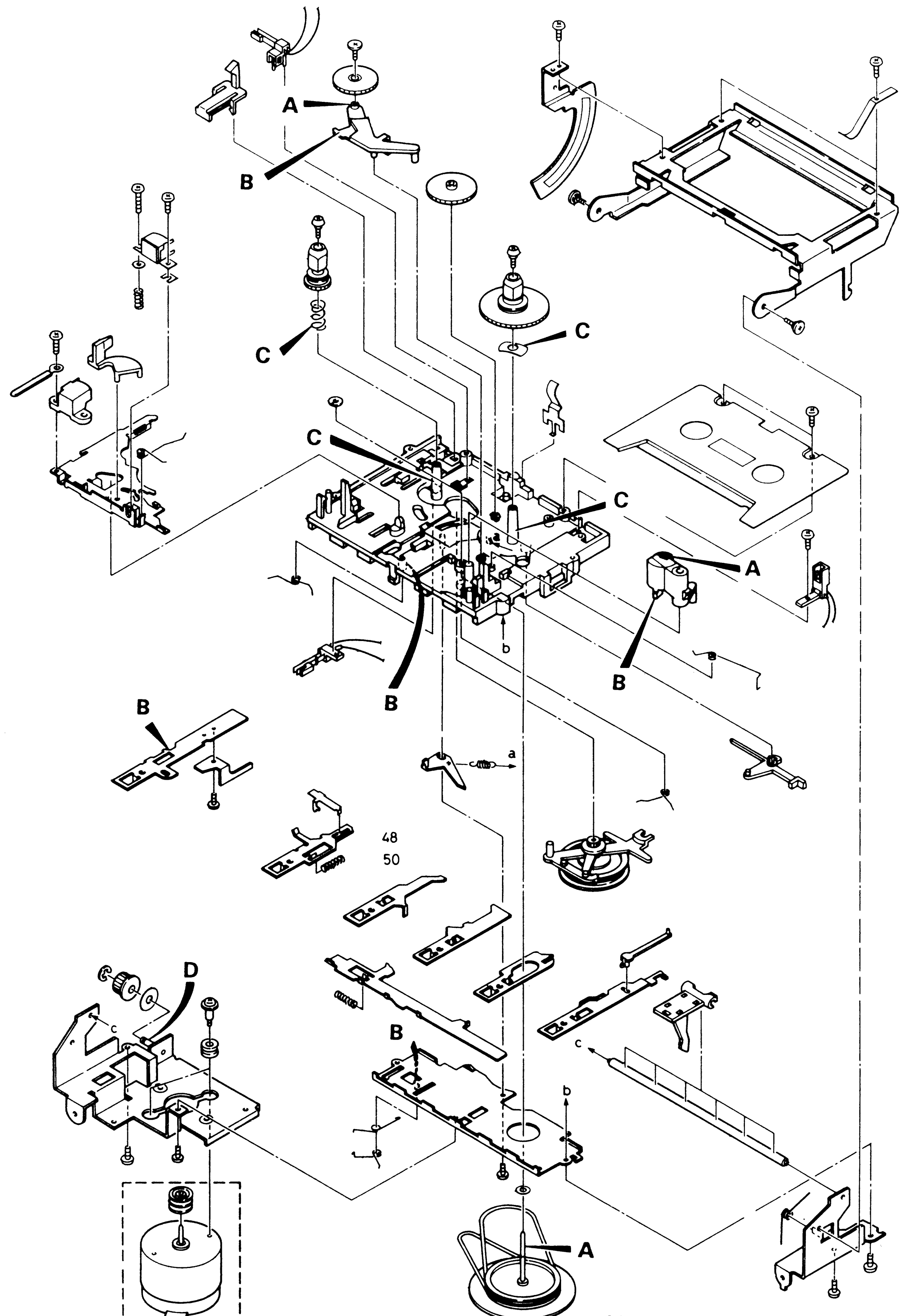
Figure 10

CD Greasing Drawing

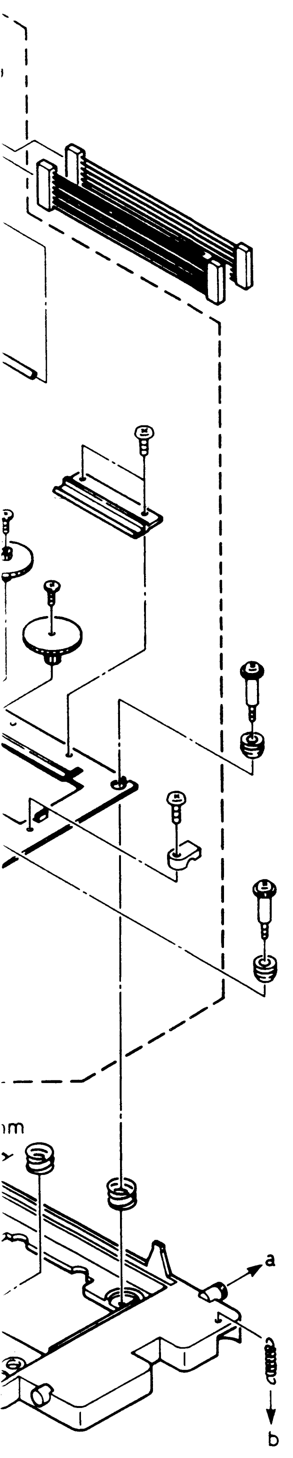

G
G (INSIDE)
G (INSIDE)
G
G
G
G
G
G
G
G
7mm
7mm
7mm
7mm
a
b
a
b

G : 4822 390 20148 (EM-50L)

Tape Deck Greasing Drawing

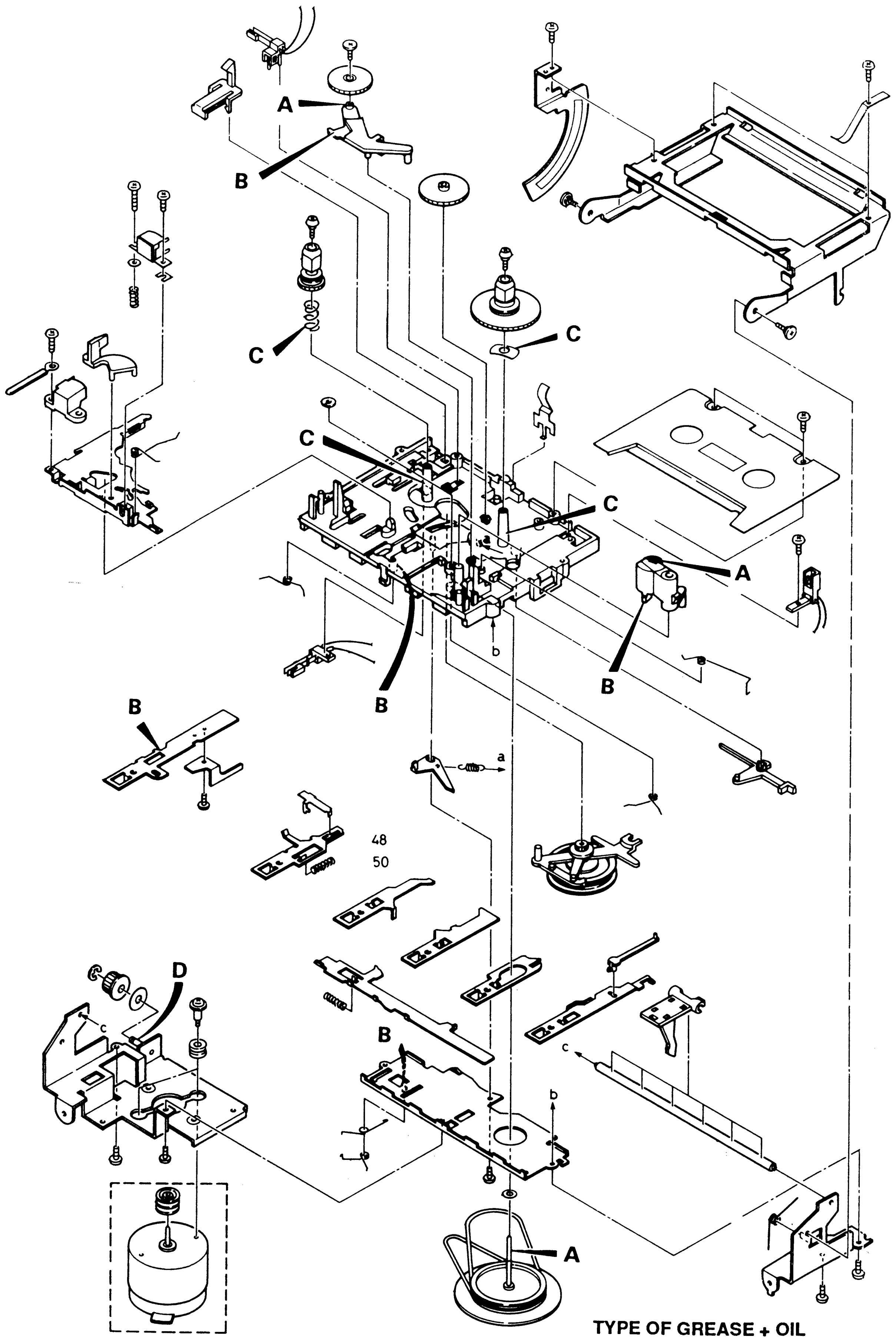

A
B
C
C
C
C
A
B
B
B
b
a
48
50
D
B
b
c
c
A

TYPE OF GREASE + OIL
A:
B:
C:
D:



20148 (EM-50L)

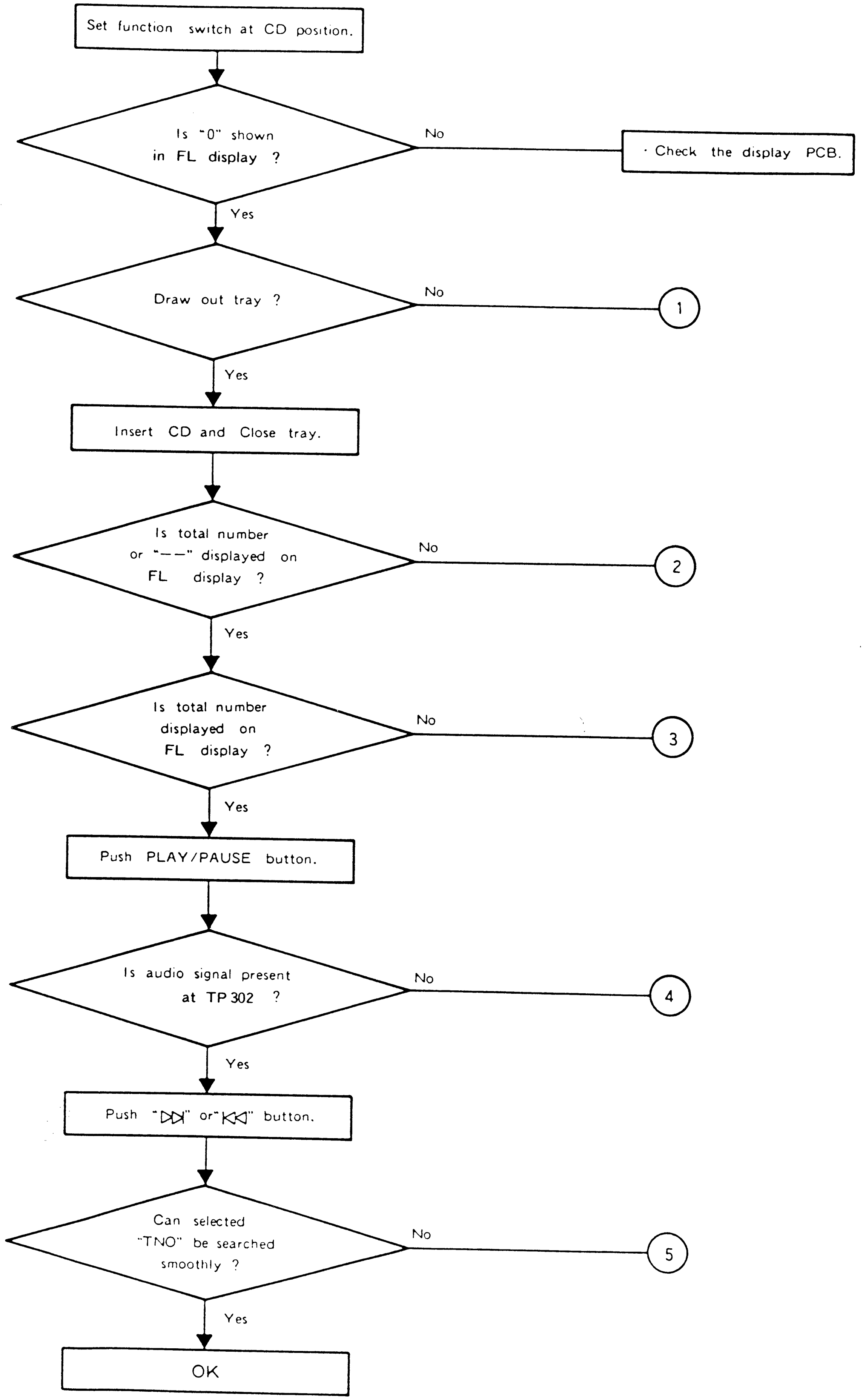
Tape Deck Greasing Drawing


A
B
C
C
C
C
A
B
B
B
a
b
48
50
D
B
c
b
c
A

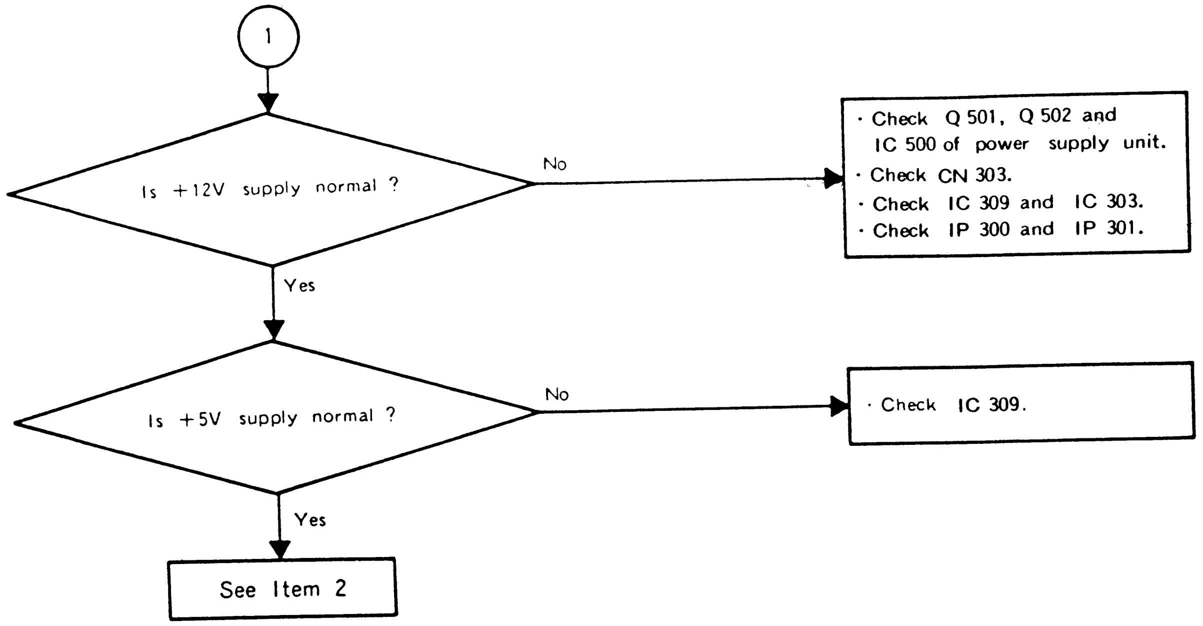
TYPE OF GREASE + OIL
A:
B:
C:
D:

Troubleshooting Chart, CD

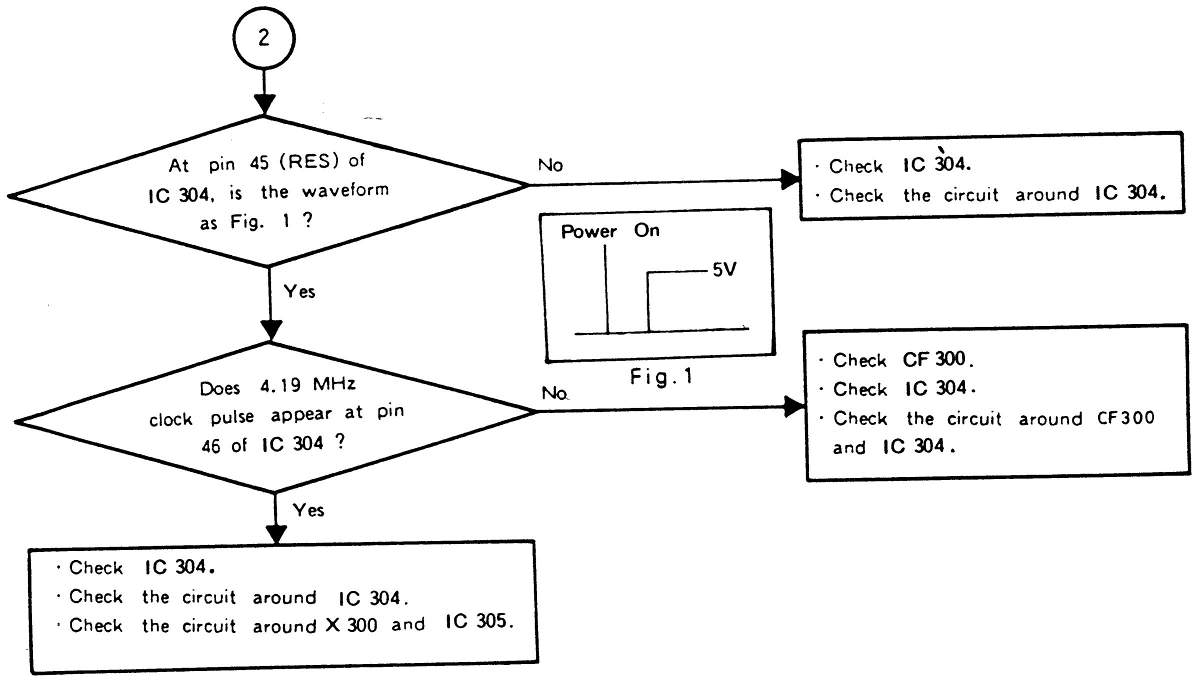
(See CD/Dack PCB Bottom View)


Set function switch at CD position.
Is "0" shown in FL display ?
No
· Check the display PCB.
Yes
Draw out tray ?
No
1
Yes
Insert CD and Close tray.
Is total number or "– –" displayed on FL display ?
No
2
Yes
Is total number displayed on FL display ?
No
3
Yes
Push PLAY/PAUSE button.
Is audio signal present at TP302 ?
No
4
Yes
Push "▷▷|" or "|◁◁" button.
Can selected "TNO" be searched smoothly ?
No
5
Yes
OK

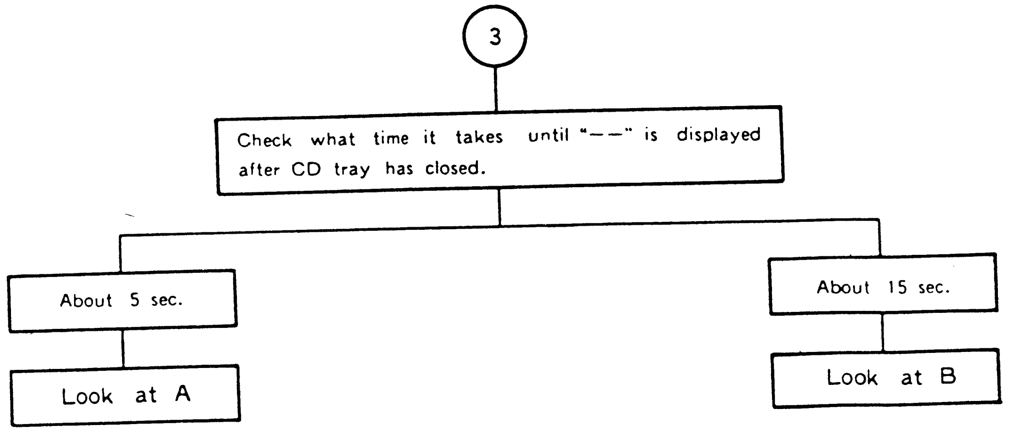
Item 1 When no tray draw out.


1
Is +12V supply normal ?
No
· Check Q 501, Q 502 and IC 500 of power supply unit.
· Check CN 303.
· Check IC 309 and IC 303.
· Check IP 300 and IP 301.
Yes
Is +5V supply normal ?
No
· Check IC 309.
Yes
See Item 2

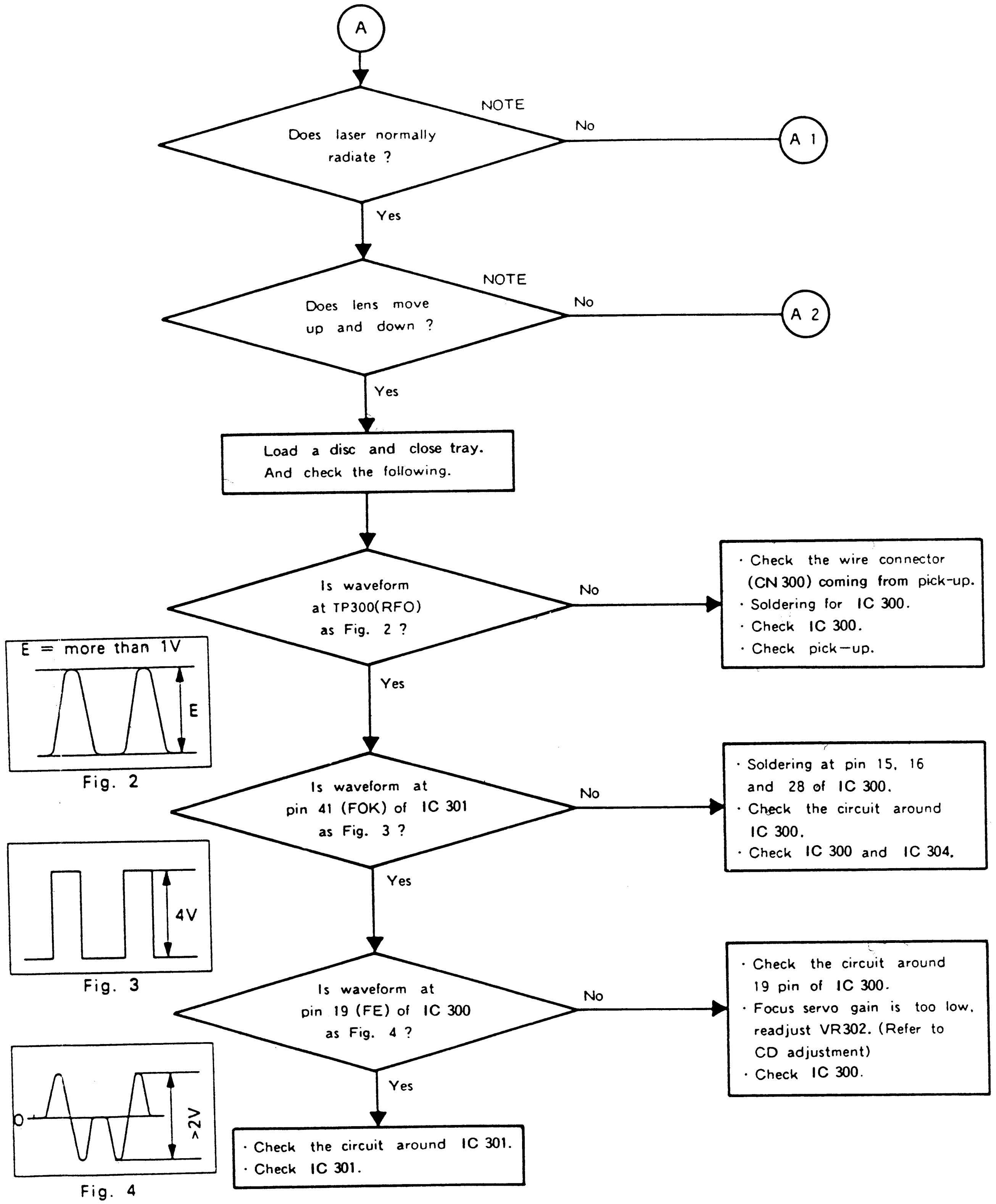
Item 2 When no FL display come on.


2
At pin 45 (RES) of IC 304, is the waveform as Fig. 1 ?
No
· Check IC 304.
· Check the circuit around IC 304.
Power On
5V
Fig. 1
Yes
Does 4.19 MHz clock pulse appear at pin 46 of IC 304 ?
No
· Check CF 300.
· Check IC 304.
· Check the circuit around CF300 and IC 304.
Yes
· Check IC 304.
· Check the circuit around IC 304.
· Check the circuit around X 300 and IC 305.

Item 3 When TNO. and time display are indicated "——" and "——:——".


3
Check what time it takes until "——" is displayed after CD tray has closed.
About 5 sec.
About 15 sec.
Look at A
Look at B

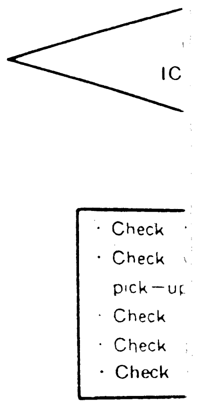
3—A


A
Does laser normally radiate ?
NOTE
No
A 1
Yes
Does lens move up and down ?
NOTE
No
A 2
Yes
Load a disc and close tray. And check the following.
Is waveform at TP300(RFO) as Fig. 2 ?
No
· Check the wire connector (CN 300) coming from pick-up.
· Soldering for IC 300.
· Check IC 300.
· Check pick—up.
E = more than 1V
E
Fig. 2
Yes
Is waveform at pin 41 (FOK) of IC 301 as Fig. 3 ?
No
· Soldering at pin 15, 16 and 28 of IC 300.
· Check the circuit around IC 300.
· Check IC 300 and IC 304.
4V
Fig. 3
Yes
Is waveform at pin 19 (FE) of IC 300 as Fig. 4 ?
No
· Check the circuit around 19 pin of IC 300.
· Focus servo gain is too low, readjust VR302. (Refer to CD adjustment)
· Check IC 300.
0
>2V
Fig. 4
Yes
· Check the circuit around IC 301.
· Check IC 301.

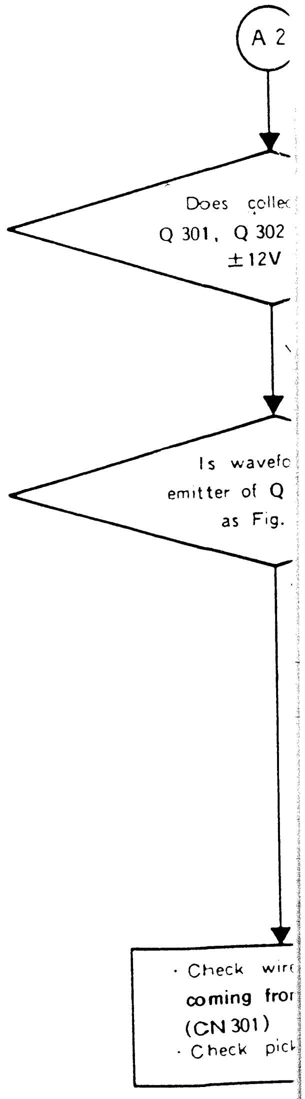
NOTE : Close the tray and check the radiation with optical power meter.
If no optical power meter is available, check radiation of pick—up unit at a distance of more than 30 cm off the pick—up unit.

[Never attempt to check radiation at a distance of less than 30 cm off.]

3—A 1


IC
· Check
· Check
pick—up
· Check
· Check
· Check

3—A 2


A 2
Does collec
Q 301, Q 302
±12V
Is wavefo
emitter of Q
as Fig.
· Check wire
coming from
(CN 301)
· Check pick

3—A

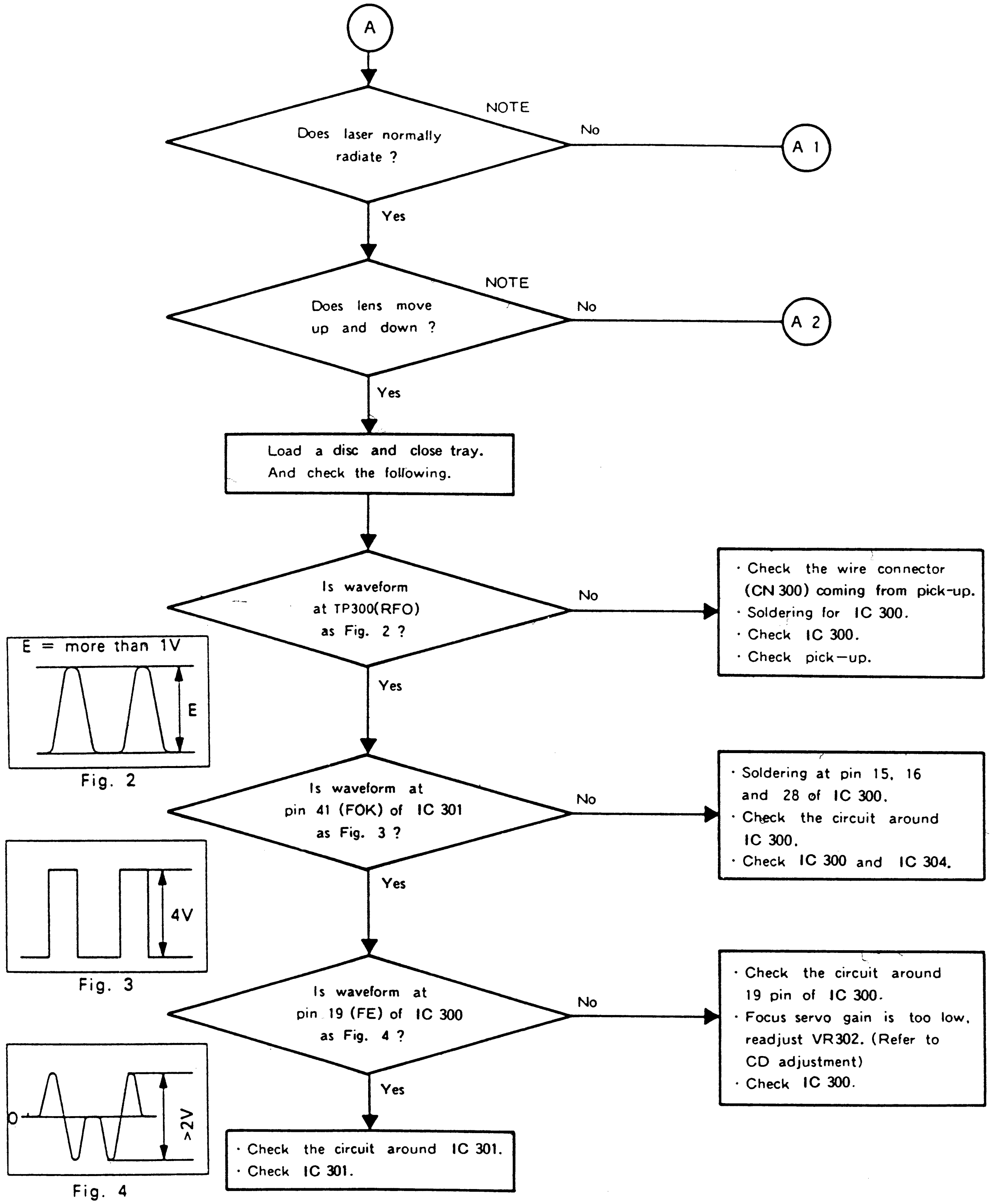

A
Does laser normally radiate ?
NOTE
No
A 1
Yes
Does lens move up and down ?
NOTE
No
A 2
Yes
Load a disc and close tray. And check the following.
Is waveform at TP300(RFO) as Fig. 2 ?
No
· Check the wire connector (CN 300) coming from pick-up.
· Soldering for IC 300.
· Check IC 300.
· Check pick—up.
Yes
E = more than 1V
E
Is waveform at pin 41 (FOK) of IC 301 as Fig. 3 ?
No
· Soldering at pin 15, 16 and 28 of IC 300.
· Check the circuit around IC 300.
· Check IC 300 and IC 304.
Yes
4V
Is waveform at pin 19 (FE) of IC 300 as Fig. 4 ?
No
· Check the circuit around 19 pin of IC 300.
· Focus servo gain is too low, readjust VR302. (Refer to CD adjustment)
· Check IC 300.
Yes
0
>2V
· Check the circuit around IC 301.
· Check IC 301.

Fig. 2

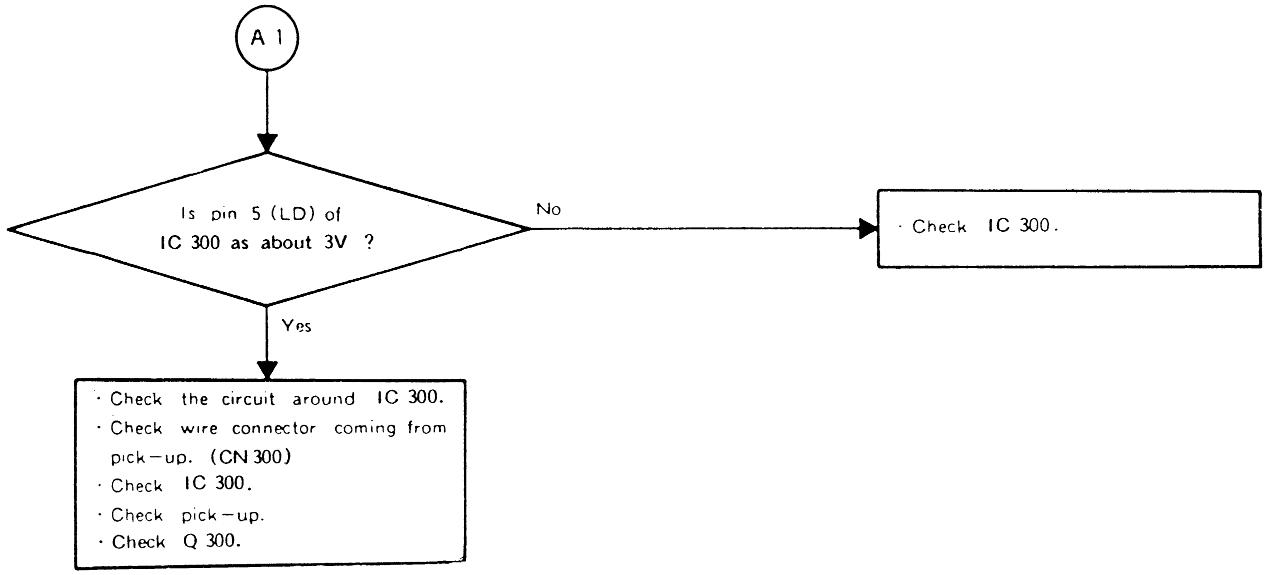
Fig. 3

Fig. 4

NOTE : Close the tray and check the radiation with optical power meter.
If no optical power meter is available, check radiation of pick—up unit at a distance of more than 30 cm off the pick—up unit.

[Never attempt to check radiation at a distance of less than 30 cm off.]

3—A 1


A 1
Is pin 5 (LD) of IC 300 as about 3V ?
No
· Check IC 300.
Yes
· Check the circuit around IC 300.
· Check wire connector coming from pick—up. (CN 300)
· Check IC 300.
· Check pick—up.
· Check Q 300.

3—A 2

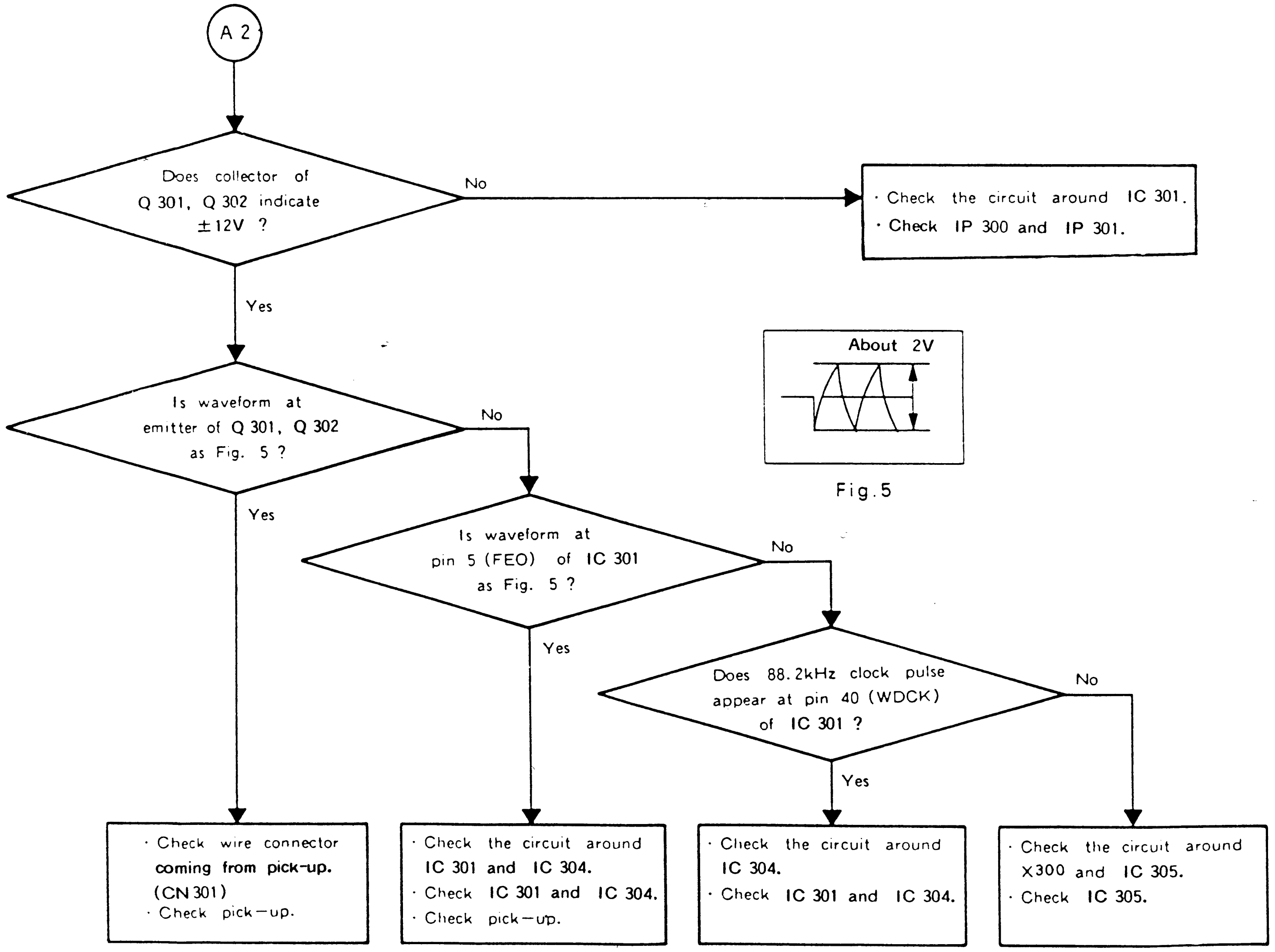
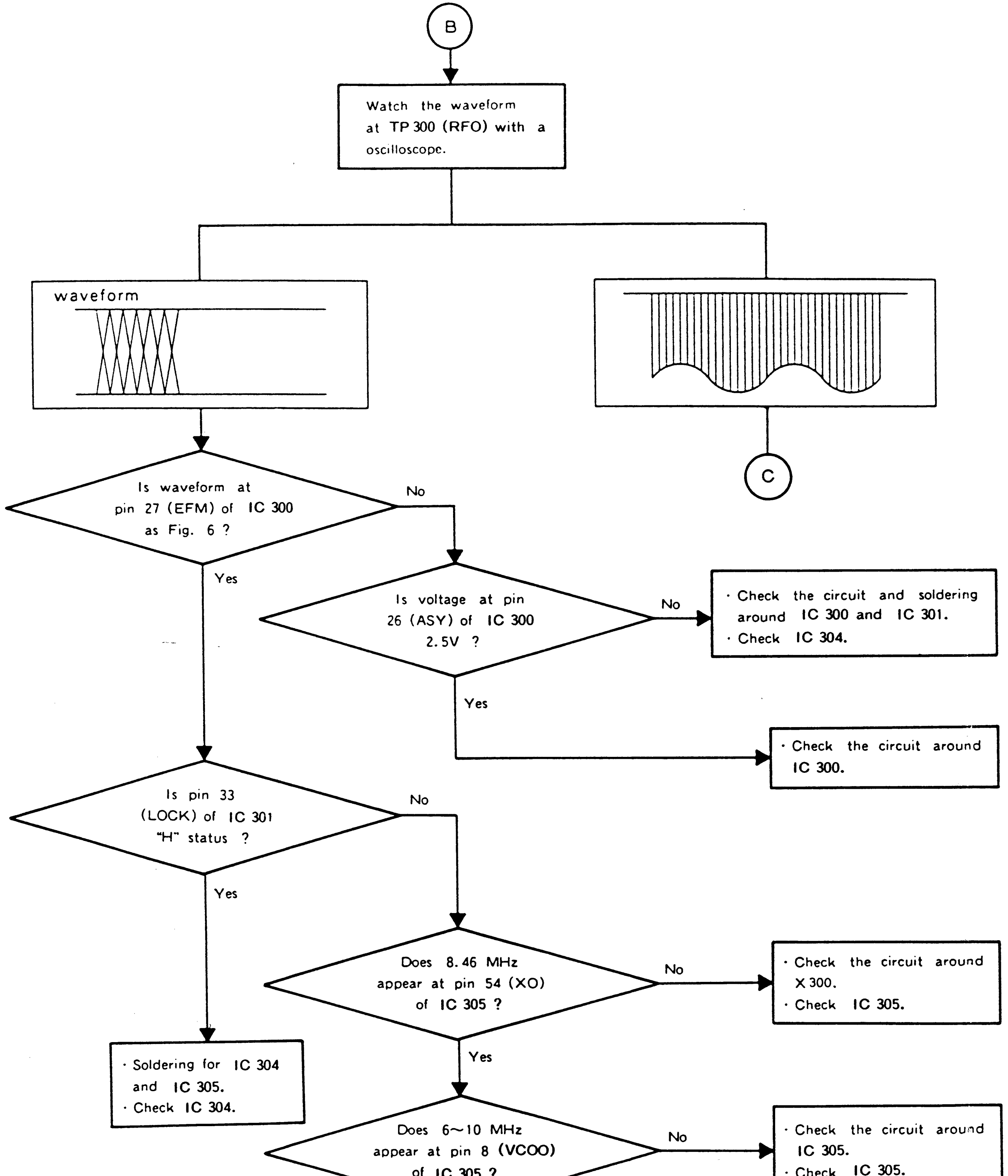
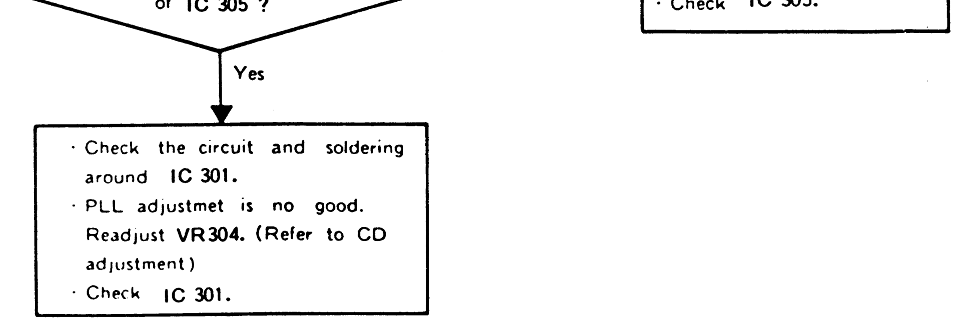

A 2
Does collector of Q 301, Q 302 indicate ±12V ?
No
· Check the circuit around IC 301.
· Check IP 300 and IP 301.
Yes
About 2V
Is waveform at emitter of Q 301, Q 302 as Fig. 5 ?
No
Yes
Is waveform at pin 5 (FEO) of IC 301 as Fig. 5 ?
No
Yes
Does 88.2kHz clock pulse appear at pin 40 (WDCK) of IC 301 ?
No
Yes
· Check wire connector coming from pick-up. (CN 301)
· Check pick—up.
· Check the circuit around IC 301 and IC 304.
· Check IC 301 and IC 304.
· Check pick—up.
· Check the circuit around IC 304.
· Check IC 301 and IC 304.
· Check the circuit around X300 and IC 305.
· Check IC 305.

Fig.5

3–B


B
Watch the waveform at TP 300 (RFO) with a oscilloscope.
waveform
C
Is waveform at pin 27 (EFM) of IC 300 as Fig. 6 ?
No
Yes
Is voltage at pin 26 (ASY) of IC 300 2.5V ?
No
· Check the circuit and soldering around IC 300 and IC 301.
· Check IC 304.
Yes
· Check the circuit around IC 300.
Is pin 33 (LOCK) of IC 301 "H" status ?
No
Yes
Does 8.46 MHz appear at pin 54 (XO) of IC 305 ?
No
· Check the circuit around X 300.
· Check IC 305.
Yes
· Soldering for IC 304 and IC 305.
· Check IC 304.
Does 6~10 MHz appear at pin 8 (VCOO) of IC 305 ?
No
· Check the circuit around IC 305.
· Check IC 305.


Yes
· Check the circuit and soldering around IC 301.
· PLL adjustmet is no good. Readjust VR304. (Refer to CD adjustment)
· Check IC 301.

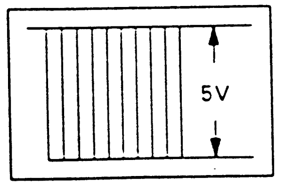
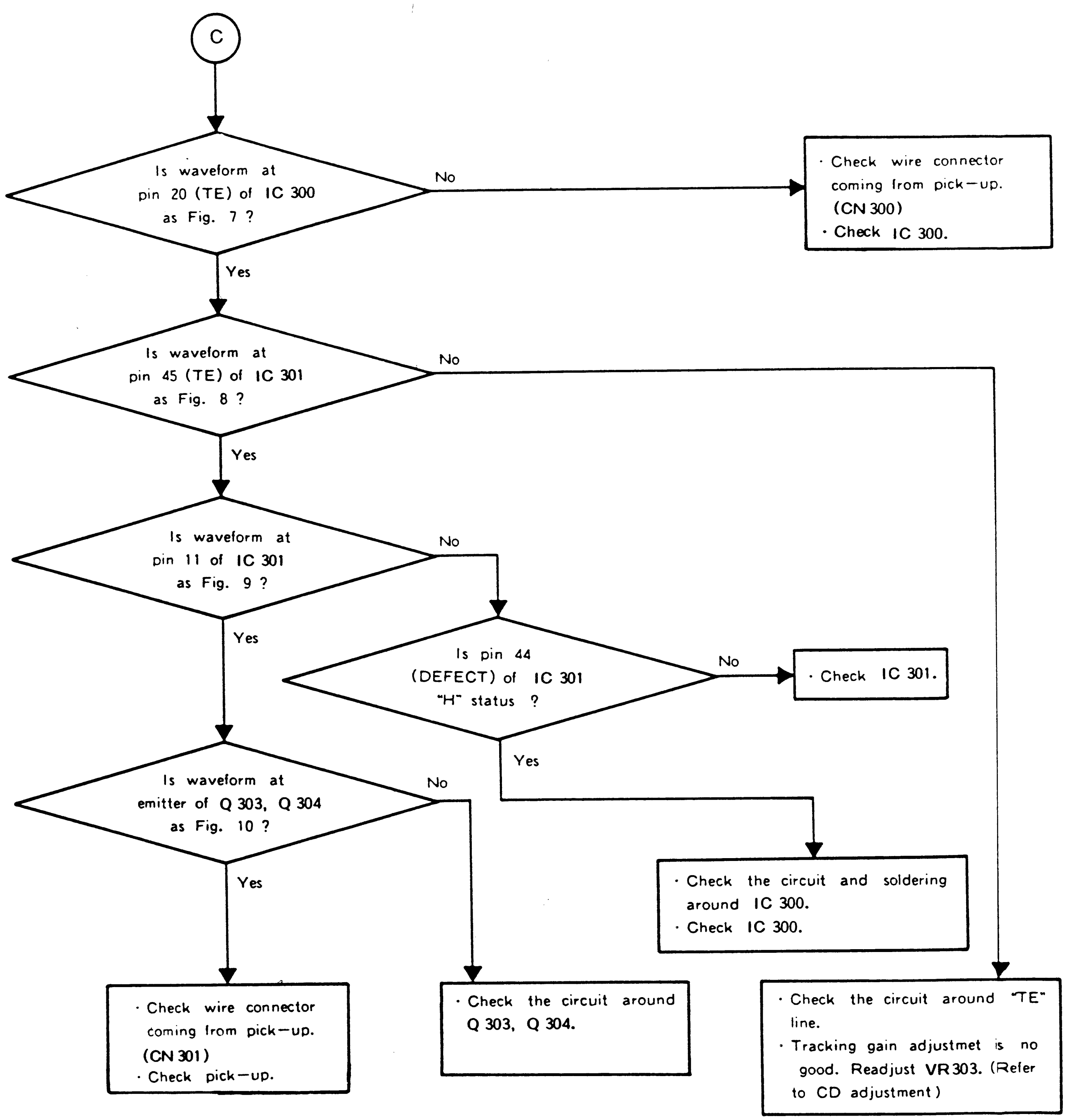


Fig.6

3–C


C
Is waveform at pin 20 (TE) of IC 300 as Fig. 7 ?
No
· Check wire connector coming from pick–up. (CN 300)
· Check IC 300.
Yes
Is waveform at pin 45 (TE) of IC 301 as Fig. 8 ?
No
Yes
Is waveform at pin 11 of IC 301 as Fig. 9 ?
No
Yes
Is pin 44 (DEFECT) of IC 301 "H" status ?
No
· Check IC 301.
Yes
Is waveform at emitter of Q 303, Q 304 as Fig. 10 ?
No
Yes
· Check the circuit and soldering around IC 300.
· Check IC 300.
· Check wire connector coming from pick–up. (CN 301)
· Check pick–up.
· Check the circuit around Q 303, Q 304.
· Check the circuit around "TE" line.
· Tracking gain adjustmet is no good. Readjust VR303. (Refer to CD adjustment)

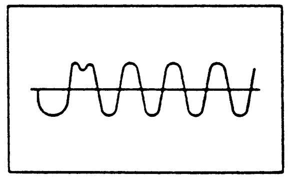


Fig. 7

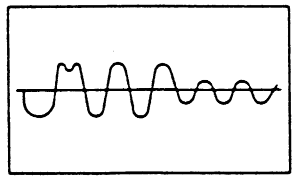


Fig.8

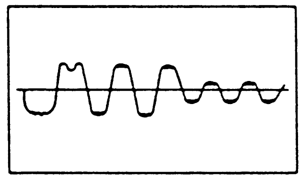


Fig.9

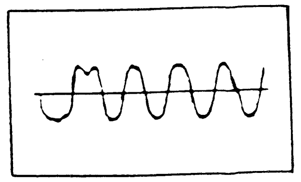
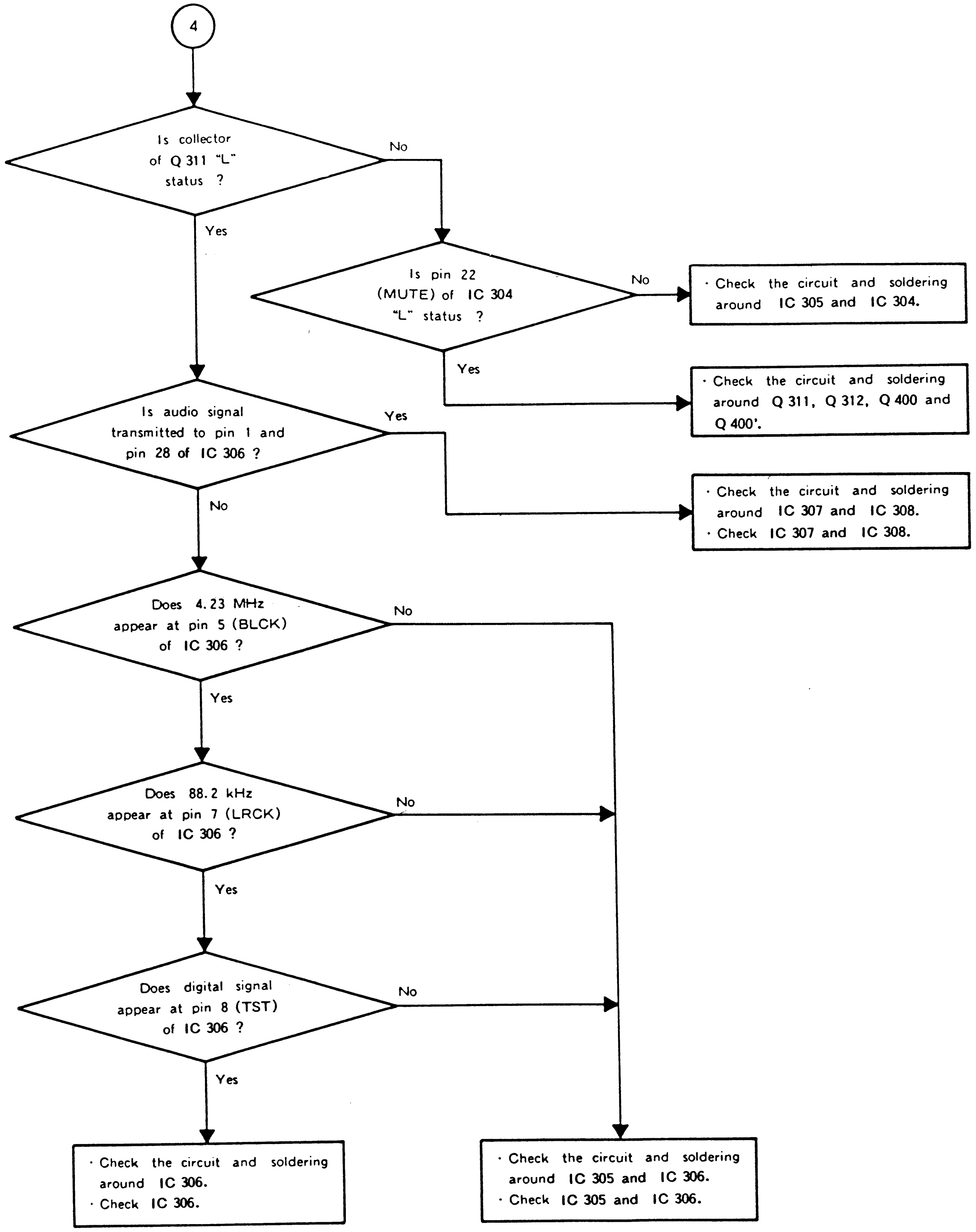
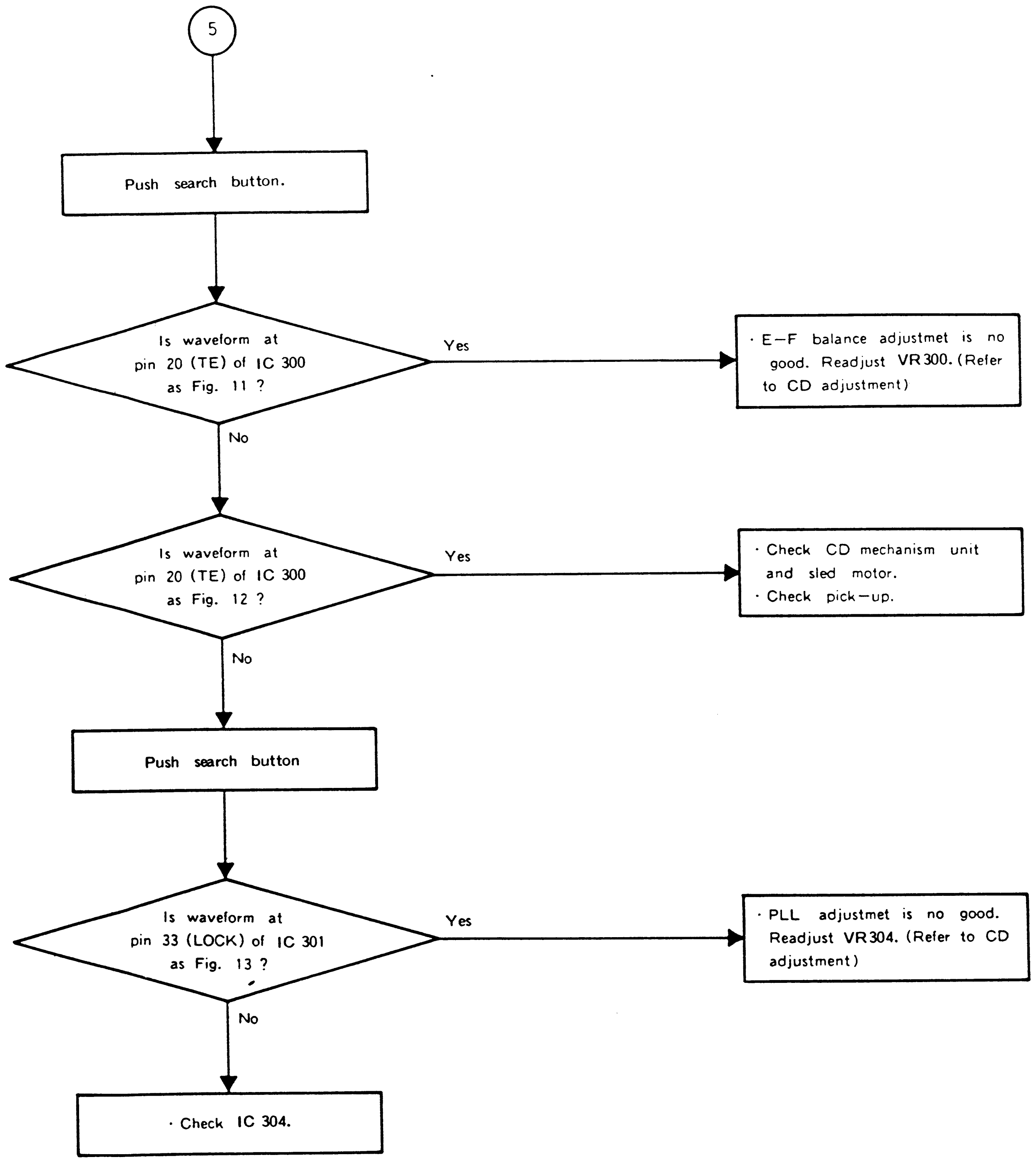


Fig.10

Item 4 When audio-signals are transmitted to output terminals.


4
Is collector of Q 311 "L" status ?
No
Yes
Is pin 22 (MUTE) of IC 304 "L" status ?
No
· Check the circuit and soldering around IC 305 and IC 304.
Yes
· Check the circuit and soldering around Q 311, Q 312, Q 400 and Q 400'.
Is audio signal transmitted to pin 1 and pin 28 of IC 306 ?
Yes
· Check the circuit and soldering around IC 307 and IC 308.
· Check IC 307 and IC 308.
No
Does 4.23 MHz appear at pin 5 (BLCK) of IC 306 ?
No
Yes
Does 88.2 kHz appear at pin 7 (LRCK) of IC 306 ?
No
Yes
Does digital signal appear at pin 8 (TST) of IC 306 ?
No
Yes
· Check the circuit and soldering around IC 306.
· Check IC 306.
· Check the circuit and soldering around IC 305 and IC 306.
· Check IC 305 and IC 306.

Item 5 When smooth selection of programs is impossible.


5
Push search button.
Is waveform at pin 20 (TE) of IC 300 as Fig. 11 ?
Yes
· E-F balance adjustmet is no good. Readjust VR300. (Refer to CD adjustment)
No
Is waveform at pin 20 (TE) of IC 300 as Fig. 12 ?
Yes
· Check CD mechanism unit and sled motor.
· Check pick-up.
No
Push search button
Is waveform at pin 33 (LOCK) of IC 301 as Fig. 13 ?
Yes
· PLL adjustmet is no good. Readjust VR304. (Refer to CD adjustment)
No
· Check IC 304.

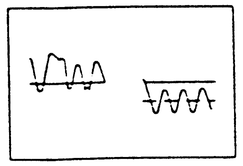


Fig.11

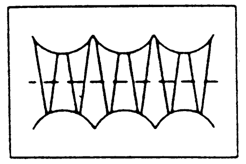


Fig.12

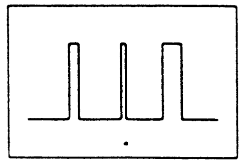
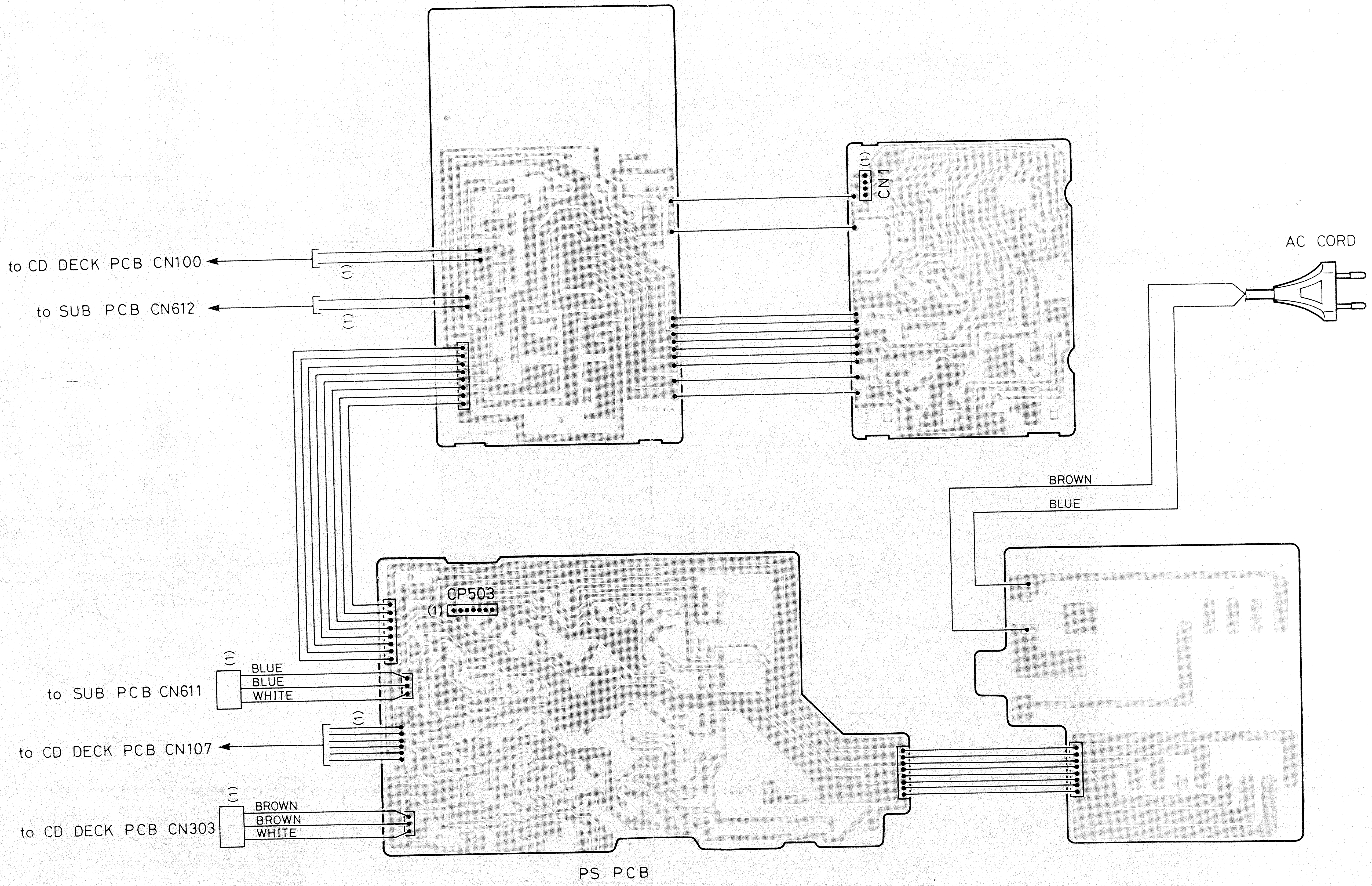
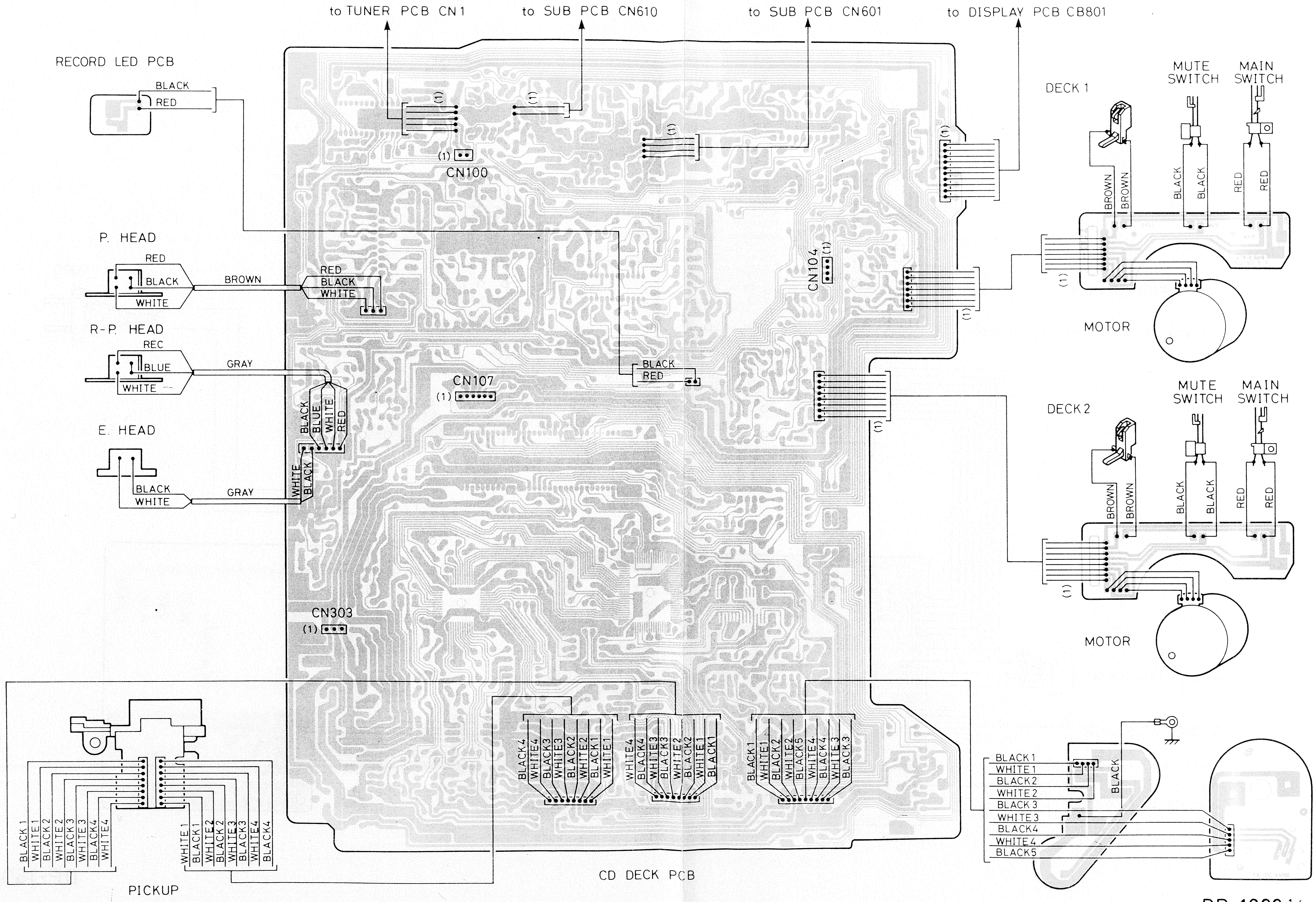


Fig.13

WIRING DIAGRAM 3/3

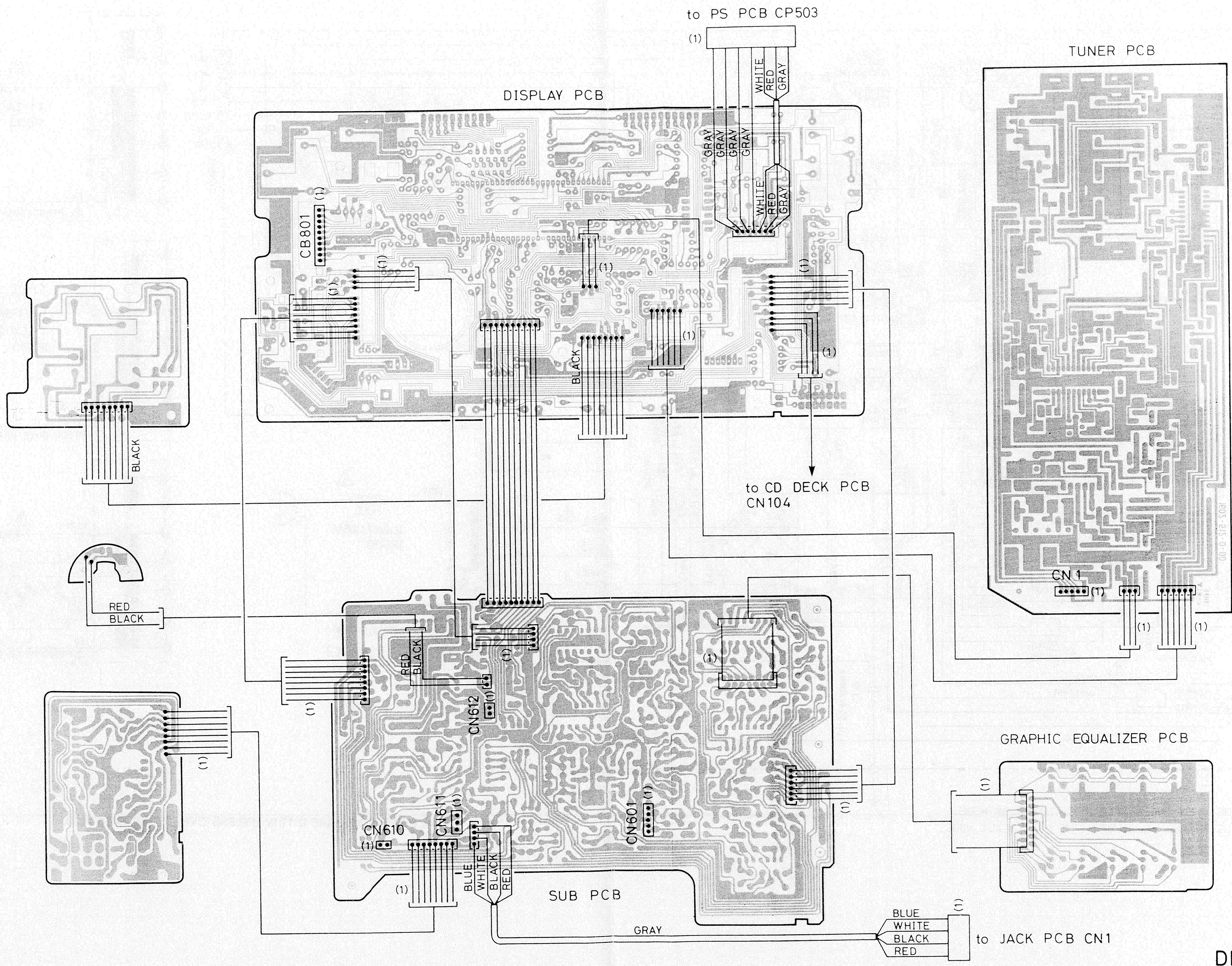

CN1
(1)
to CD DECK PCB CN100
(1)
to SUB PCB CN612
(1)
AC CORD
BROWN
BLUE
CP503
(1)
(1)
BLUE
BLUE
WHITE
to SUB PCB CN611
(1)
to CD DECK PCB CN107
(1)
BROWN
BROWN
WHITE
to CD DECK PCB CN303
PS PCB

WIRING DIAGRAM 1/3


to TUNER PCB CN1
to SUB PCB CN610
to SUB PCB CN601
to DISPLAY PCB CB801
RECORD LED PCB
BLACK
RED
(1)
CN100
P. HEAD
RED
BLACK
WHITE
BROWN
RED
BLACK
WHITE
R-P. HEAD
REC
BLUE
WHITE
GRAY
E. HEAD
BLACK
WHITE
GRAY
BLACK
BLUE
WHITE
RED
WHITE
BLACK
CN107
CN104
CN303
BLACK
RED
DECK 1
MUTE SWITCH
MAIN SWITCH
BROWN
BROWN
BLACK
BLACK
RED
RED
MOTOR
DECK 2
MUTE SWITCH
MAIN SWITCH
BROWN
BROWN
BLACK
BLACK
RED
RED
MOTOR
BLACK 1
WHITE 1
BLACK 2
WHITE 2
BLACK 3
WHITE 3
BLACK 4
WHITE 4
BLACK 1
WHITE 1
BLACK 2
WHITE 2
BLACK 3
WHITE 3
BLACK 4
WHITE 4
BLACK 4
WHITE 4
BLACK 3
WHITE 3
BLACK 2
WHITE 2
BLACK 1
WHITE 1
WHITE 4
BLACK 4
WHITE 3
BLACK 3
WHITE 2
BLACK 2
WHITE 1
BLACK 1
BLACK 1
WHITE 1
BLACK 2
BLACK 5
WHITE 2
WHITE 4
BLACK 4
WHITE 3
BLACK 3
PICKUP
CD DECK PCB
BLACK 1
WHITE 1
BLACK 2
WHITE 2
BLACK 3
WHITE 3
BLACK 4
WHITE 4
BLACK 5
BLACK

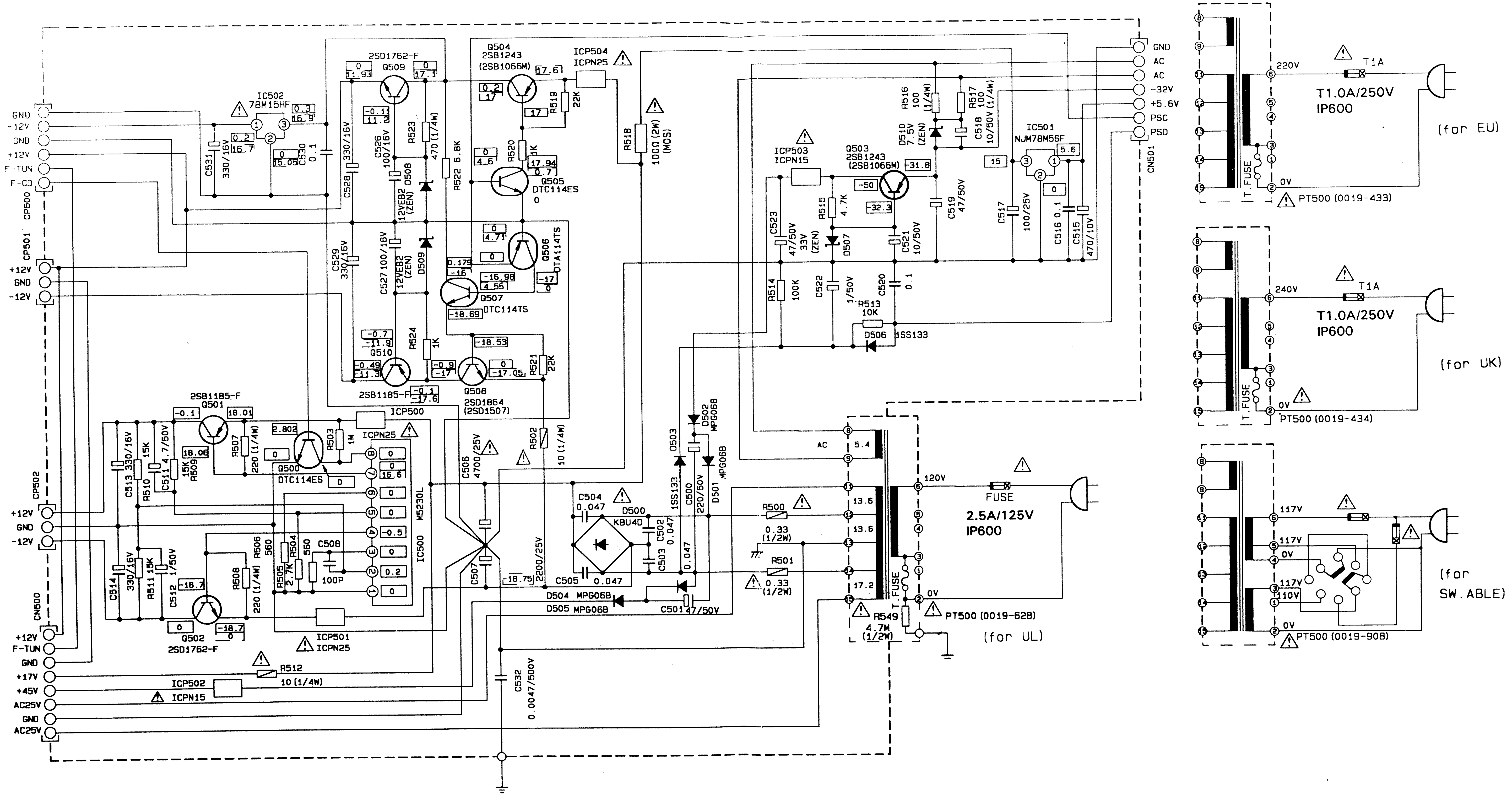
DP-1602 1/3

WIRING DIAGRAM 2/3


to PS PCB CP503
(1)
WHITE
RED
GRAY
DISPLAY PCB
GRAY
GRAY
GRAY
GRAY
WHITE
RED
GRAY
CB801
(1)
BLACK
TUNER PCB
to CD DECK PCB
CN104
BLACK
RED
BLACK
CN1
CN612
CN610
CN611
CN601
RED
BLACK
BLUE
WHITE
BLACK
RED
SUB PCB
GRAPHIC EQUALIZER PCB
GRAY
BLUE
WHITE
BLACK
RED
to JACK PCB CN1

DP-1602 2/3

SCHEMATIC DIAGRAM, POWER SUPPLY

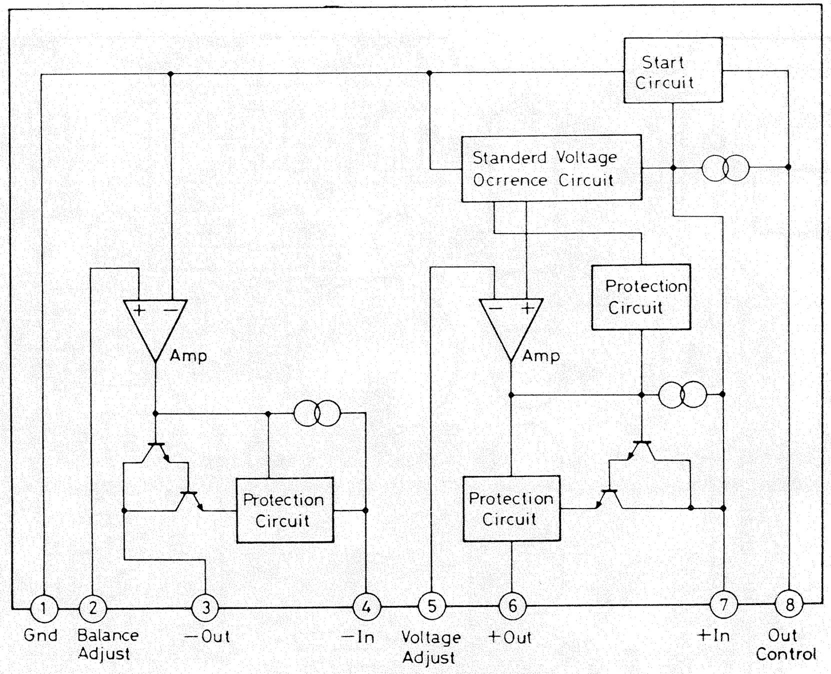

CP500
GND
+12V
GND
+12V
F-TUN
F-CD
CP501
+12V
GND
-12V
CP502
+12V
GND
-12V
CN500
+12V
F-TUN
GND
+17V
+45V
AC25V
GND
AC25V
IC502
78M15HF
C531
330/16V
C530
0.1
C528
330/16V
C529
330/16V
Q509
2SD1762-F
C526
100/16V
C527 100/16V
D508
12VEB2 (ZEN)
D509
12VEB2 (ZEN)
R523
470 (1/4W)
R522 6.8K
Q504
2SB1243
(2SB1066M)
R519
22K
R520
1K
Q505
DTC114ES
Q506
DTA114TS
Q507
DTC114TS
R524
1K
Q510
2SB1185-F
Q508
2SD1864
(2SD1507)
R521
22K
ICP504
ICPN25
R518
100Ω (2W)
(MOS)
Q501
2SB1185-F
C513 330/16V
R510 15K
C511 4.7/50V
R509 15K
R507 220 (1/4W)
Q500
DTC114ES
R503 1M
ICP500
ICPN25
IC500
M5230L
C514 330/16V
R511 15K
C512 1/50V
Q502
2SD1762-F
R508 220 (1/4W)
R506 560
R505 2.7K
R504 560
C508 100P
ICP501
ICPN25
R512
10 (1/4W)
ICP502
ICPN15
C506
4700/25V
C507
2200/25V
R502
10 (1/4W)
C532
0.0047/500V
C504
0.047
D500
KBU4D
C502 0.047
C503 0.047
C505 0.047
D503 1SS133
D502 MPG06B
C500 220/50V
D501 MPG06B
D504 MPG06B
D505 MPG06B
C501 47/50V
R500
0.33 (1/2W)
R501
0.33 (1/2W)
ICP503
ICPN15
Q503
2SB1243
(2SB1066M)
R515 4.7K
D507 33V (ZEN)
C523 47/50V
R514 100K
C522 1/50V
C520 0.1
C521 10/50V
R513 10K
D506 1SS133
R516 100 (1/4W)
D510 7.5V (ZEN)
R517 100
C518 10/50V (1/4W)
C519 47/50V
IC501
NJM78M56F
C517 100/25V
C516 0.1
C515 470/10V
CN501
GND
AC
AC
-32V
+5.6V
PSC
PSD
AC
5.4
13.6
13.6
17.2
120V
0V
FUSE
2.5A/125V
IP600
R549
4.7M
(1/2W)
T.FUSE
PT500 (0019-628)
(for UL)
220V
T1A
T1.0A/250V
IP600
0V
T.FUSE
PT500 (0019-433)
(for EU)
240V
T1A
T1.0A/250V
IP600
0V
T.FUSE
PT500 (0019-434)
(for UK)
117V
117V
0V
117V
110V
0V
PT500 (0019-908)
(for SW.ABLE)

☐ EACH VOLTAGE IS THE VALUE WHEN THE SET IS STAND BY MODE.

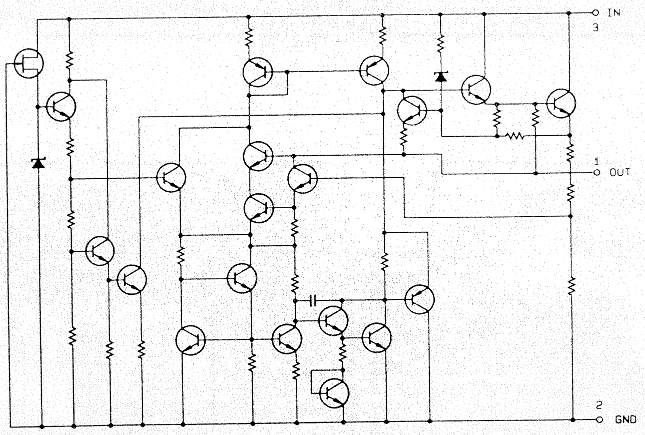
═ INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS AUX MODE.

ALL REISITORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

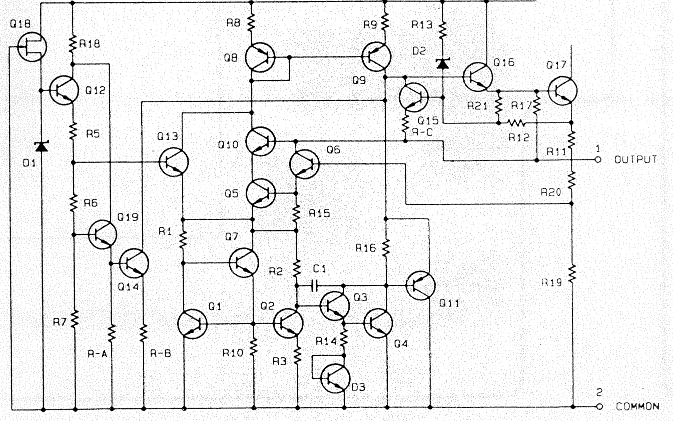
IC 500: M5230L


Start Circuit
Standerd Voltage Ocrrence Circuit
Protection Circuit
Amp
Amp
Protection Circuit
Protection Circuit
1
2
3
4
5
6
7
8
Gnd
Balance Adjust
−Out
−In
Voltage Adjust
+Out
+In
Out Control

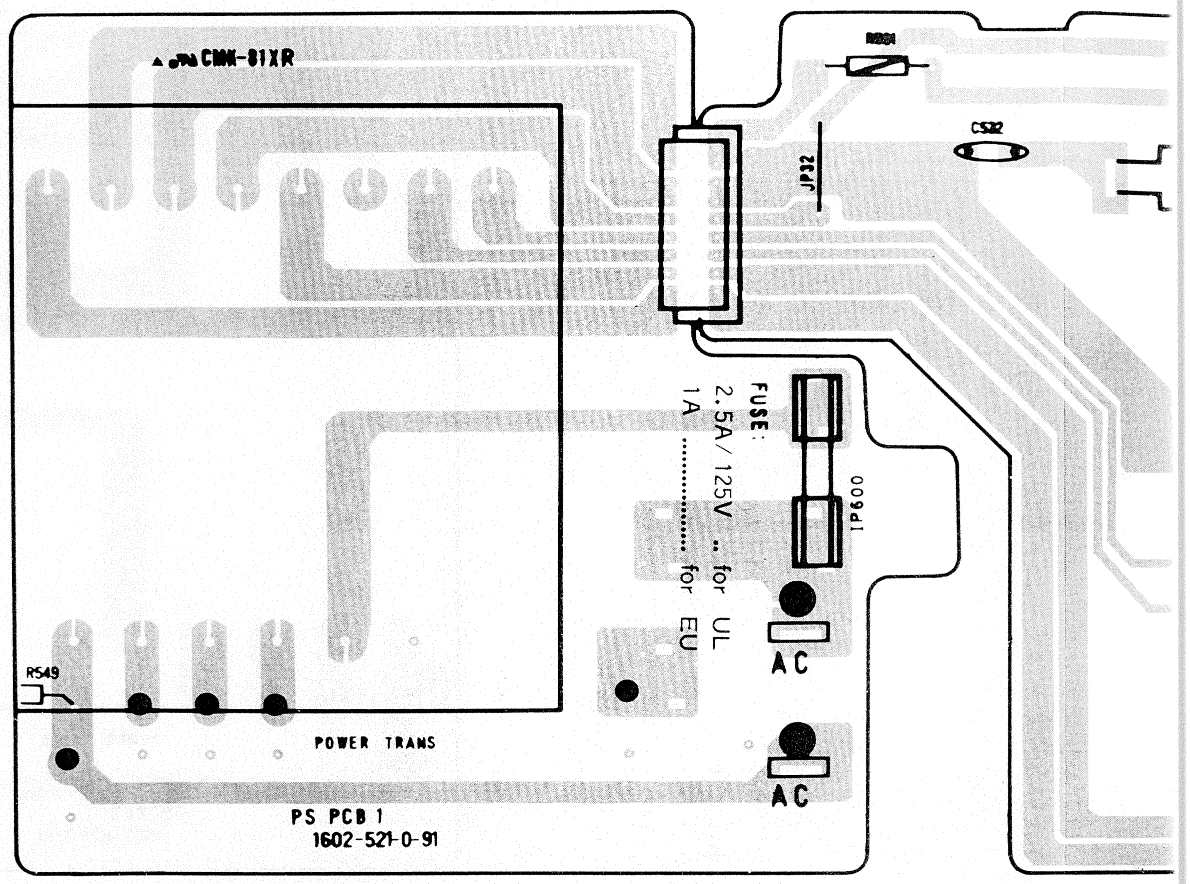
IC 501: NJM78M56FA


IN
3
1
OUT
2
GND

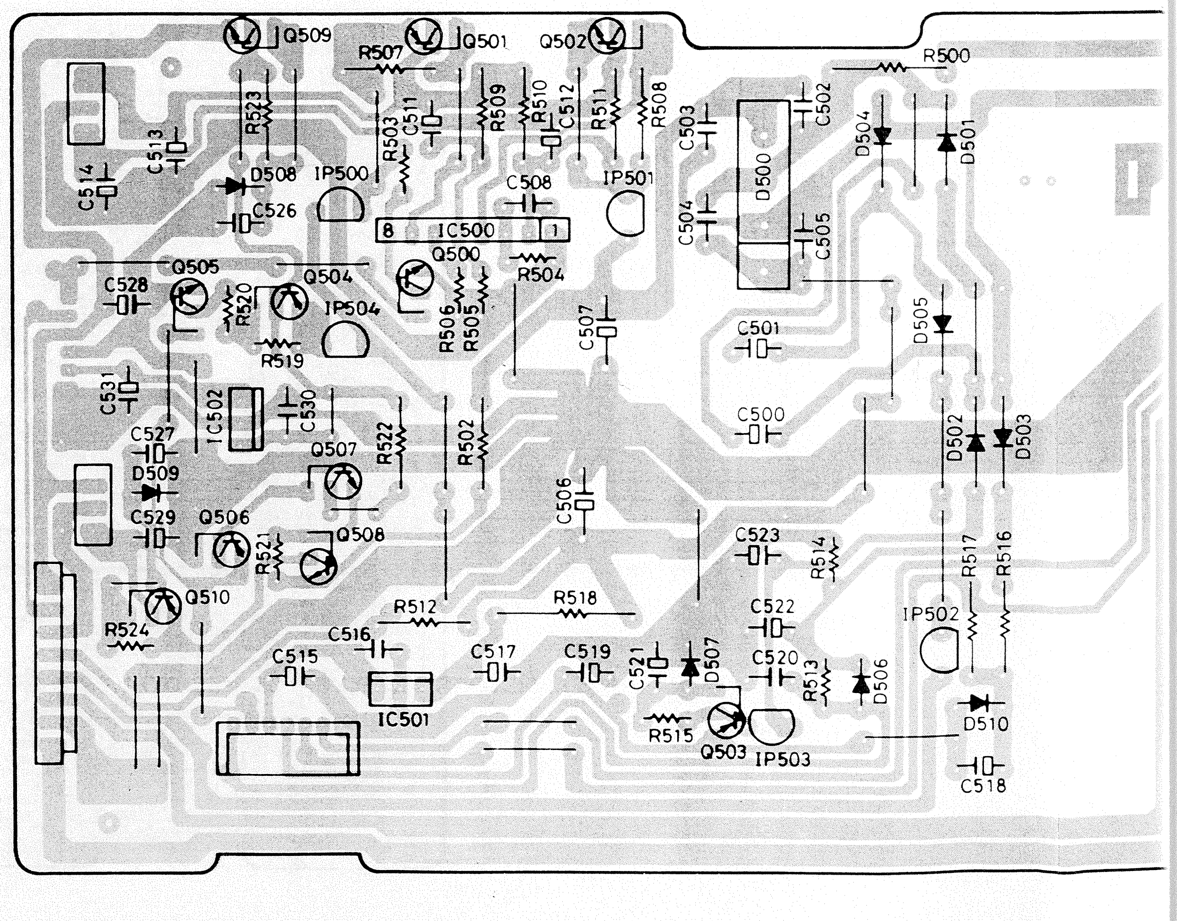
IC 502: NJM78M15FA


Q18
R18
Q12
R5
D1
R6
Q19
Q14
R7
R-A
R-B
R8
Q8
R9
Q9
R13
D2
Q16
Q17
Q15
R-C
R21
R17
R12
R11
1
OUTPUT
Q13
Q10
Q6
Q5
R15
R20
R1
Q7
R16
R2
C1
Q11
R19
Q1
Q2
Q3
Q4
R14
R10
R3
D3
2
COMMON

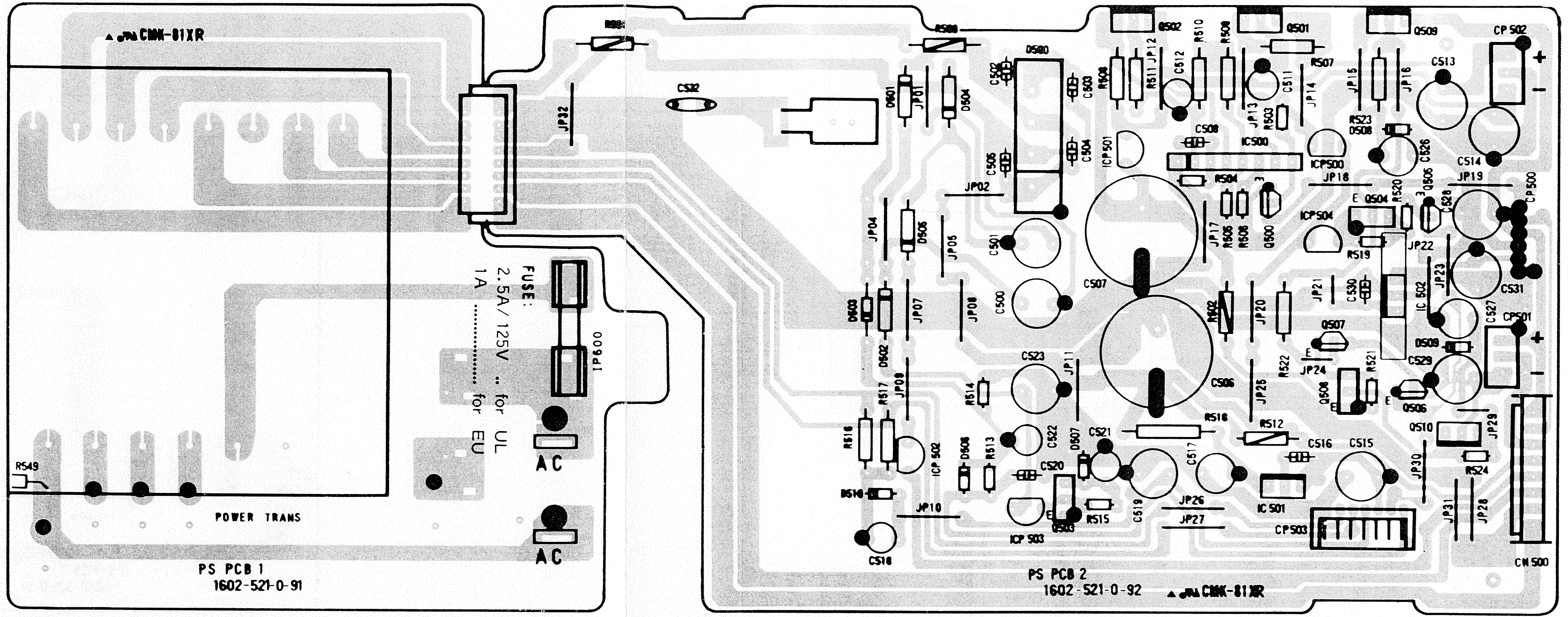
POWER SUPPLY PCB (Component Side)


CMK-81XR
JP32
FUSE:
2.5A / 125V .. for UL
1A .... for EU
IP600
AC
AC
R549
POWER TRANS
PS PCB 1
1602-521-0-91

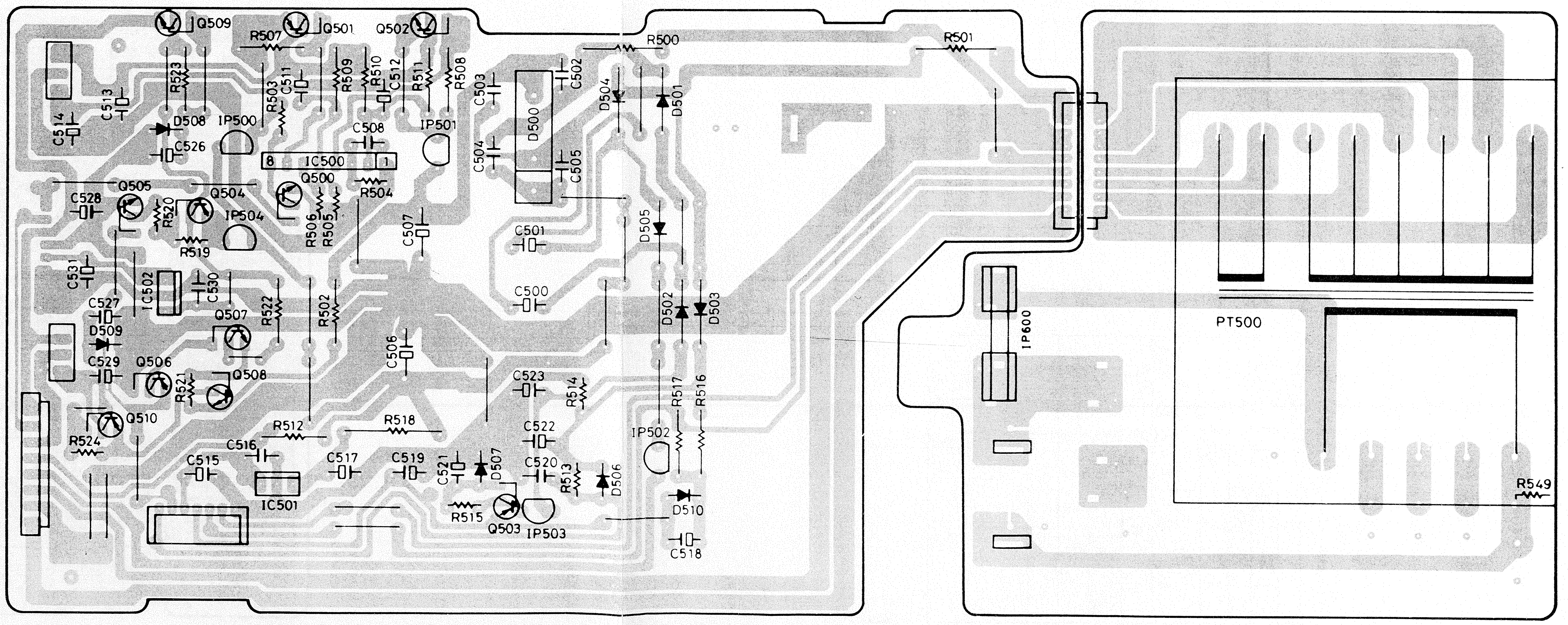
POWER SUPPLY PCB (Track Side)


Q509
R507
Q501
Q502
R500
R523
C513
C514
R503
C511
R509
R510
C512
R511
R508
C503
C502
D504
D501
D508
IP500
C508
IP501
D500
C526
8
IC500
1
C504
C505
Q500
Q505
Q504
R504
C528
R520
IP504
R506
R505
C507
C501
D505
R519
C531
IC502
C530
R522
R502
C500
C527
Q507
D502
D503
D509
C506
C529
Q506
Q508
C523
R521
R514
R517
R516
Q510
R512
R518
C522
IP502
R524
C516
C515
C517
C519
C521
D507
C520
R513
D506
IC501
R515
Q503
IP503
D510
C518

POWER SUPPLY PCB (Component Side)

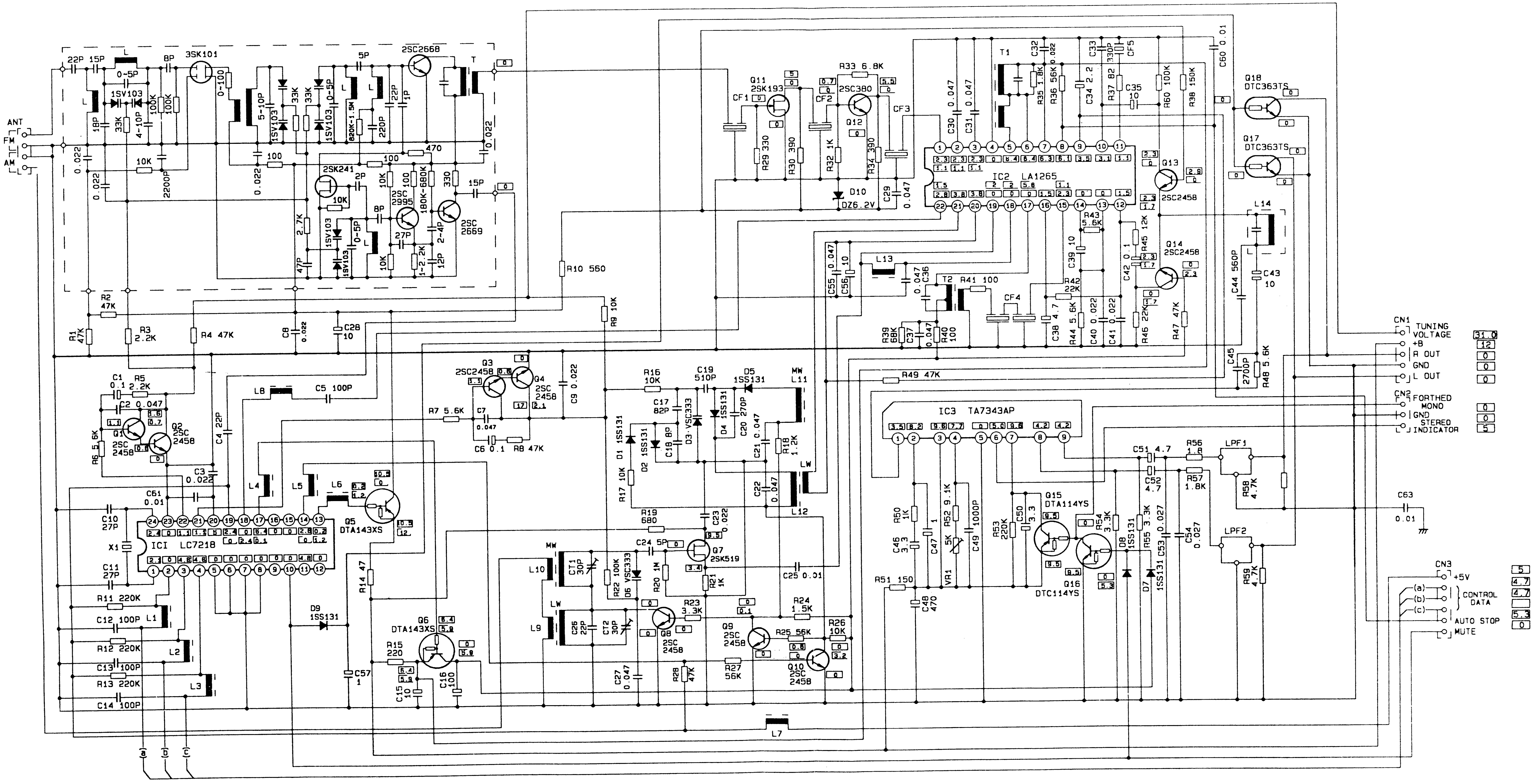

CMK-81XR
FUSE:
2.5A / 125V ... for UL
1A .... for EU
IP600
AC
AC
POWER TRANS
R549
PS PCB 1
1602-521-0-91
PS PCB 2
1602-521-0-92
CMK-81XR
JP32
CS32
D500
Q502
Q501
Q509
CP502
C513
C514
JP19
CP500
C531
CP501
C529
Q506
Q510
R524
CN500
CP503
IC501
IC500
C507
C506
C523
C518
ICP503
JP10
JP26
JP27
IC502
ICP500
ICP504
ICP501
ICP502

POWER SUPPLY PCB (Track Side)


Q509
R507
Q501
Q502
R500
R501
R523
R503
C511
R509
R510
C512
R511
R508
C503
C502
D504
D501
C514
C513
D508
IP500
IP501
C508
C526
IC500
C504
D500
C505
C528
Q505
Q504
Q500
R504
R520
IP504
R506
R505
C507
C501
D505
R519
C531
IC502
C530
C527
D509
Q507
R522
R502
C500
D502
D503
C529
Q506
Q508
R521
C506
C523
R514
R517
R516
Q510
R524
R512
R518
C522
IP502
C516
C515
C517
C519
C521
D507
C520
R513
D506
IC501
R515
Q503
IP503
D510
C518
IP600
PT500
R549

1602−501−0
1602−521−0

SCHEMATIC DIAGRAM, TUNER


ANT
FM
AM
3SK101
1SV103
2SC2668
2SK241
2SC2995
2SC2669
820K-1.5M
180K-680K
R1 47K
R2 47K
R3 2.2K
R4 47K
C8 0.022
C28 10
R10 560
R9 10K
Q11 2SK193
CF1
CF2
Q12 2SC380
CF3
R33 6.8K
D10 DZ6.2V
IC2 LA1265
T1
T2
R41 100
CF4
L13
L14
Q13 2SC2458
Q14 2SC2458
Q17 DTC363TS
Q18 DTC363TS
C60 0.01
CN1
TUNING VOLTAGE
+B
R OUT
GND
L OUT
CN2
FORTHED MONO
GND
STEREO INDICATOR
CN3
+5V
(a)
(b)
(c)
CONTROL DATA
AUTO STOP
MUTE
31.0
12
0
0
0
0
0
5
5
4.7
4.7
5.3
0
IC1 LC7218
X1
Q1 2SC2458
Q2 2SC2458
Q3 2SC2458
Q4 2SC2458
Q5 DTA143XS
Q6 DTA143XS
Q7 2SK519
Q8 2SC2458
Q9 2SC2458
Q10 2SC2458
D1 1SS131
D2 1SS131
D3 VSC333
D4 1SS131
D5 1SS131
D6 VSC333
D7 1SS131
D8 1SS131
D9 1SS131
MW L11
LW L12
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
CT1 30P
CT2 30P
R49 47K
IC3 TA7343AP
VR1 5K
Q15 DTA114YS
Q16 DTC114YS
LPF1
LPF2
C63 0.01
R51 150

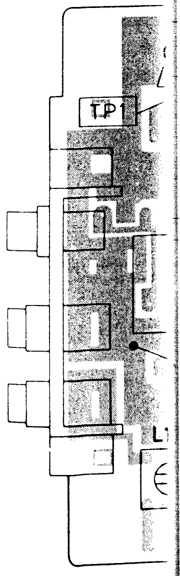
☐ EACH VOLTAGE IS THE VALUE WHEN THE SET IS FM AND LW MODE.

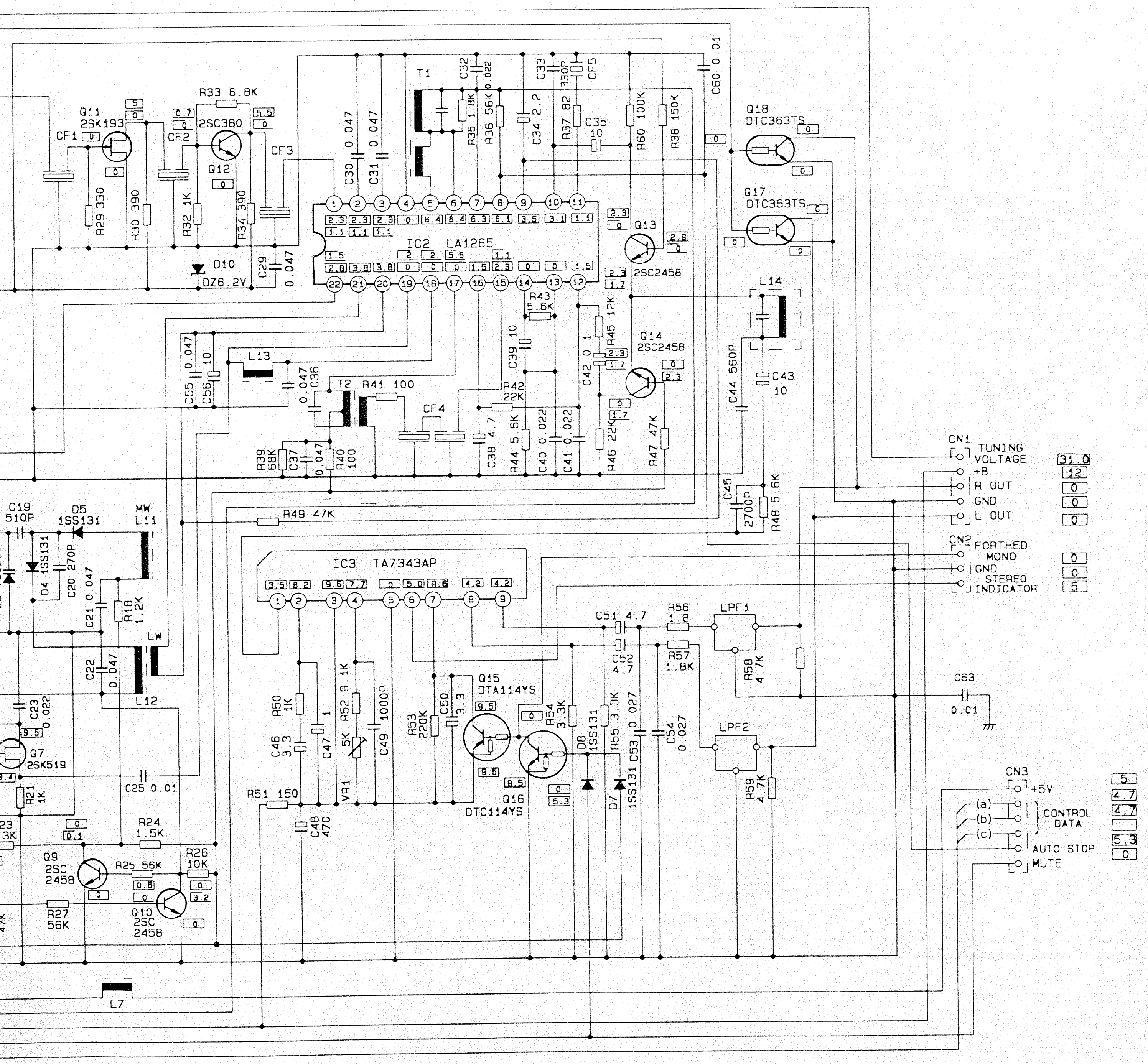
☰ INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS MW MODE.

ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

SI
Varicap
F 87.5 - 1
M 522 - 1
L 144 - 2
IF alignr
AM
F
RF align
MV
LV
Stereo c
F

TUNER





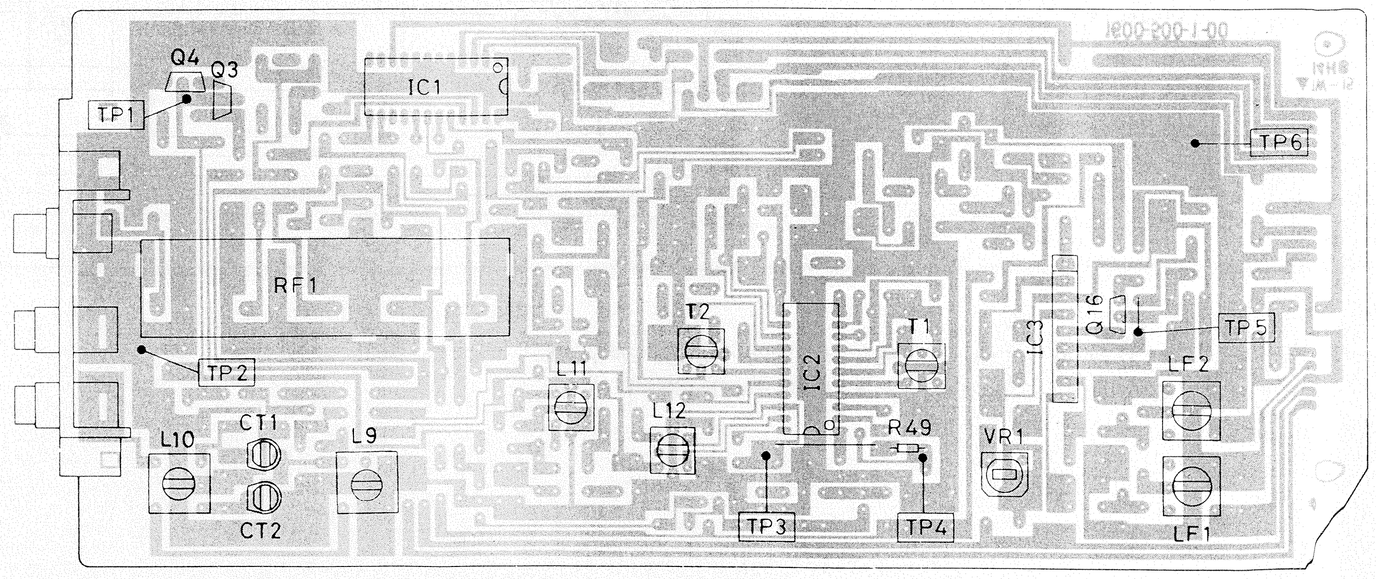
Q11 2SK193
CF1
CF2
R33 6.8K
2SC380
Q12
CF3
R29 330
R30 390
R32 1K
R34 390
D10 DZ6.2V
C29 0.047
C30 0.047
C31 0.047
T1
C32
R35 1.8K
R36 56K
C33
C34 2.2
R37 82
C35 10
R60 100K
R38 150K
C60 0.01
Q18 DTC363TS
Q17 DTC363TS
IC2 LA1265
Q13 2SC2458
L14
Q14 2SC2458
R43 5.6K
R45 12K
C39 10
C42 0.1
R42 22K
C44 560P
C43 10
L13
C55 0.047
C56 10
C36 0.047
T2
R41 100
CF4
R39 68K
C37 0.047
R40 100
C38 4.7
R44 5.6K
C40 0.022
C41 0.022
R46 22K
R47 47K
C45 2700P
R48 5.6K
CN1
TUNING VOLTAGE
+B
R OUT
GND
L OUT
CN2
FORTHED MONO
GND
STEREO INDICATOR
C19 510P
D5 1SS131
MW L11
R49 47K
D4 1SS131
C20 270P
C21 0.047
R18 1.2K
LW
C22 0.047
L12
C23 0.022
Q7 2SK519
C25 0.01
R21 1K
IC3 TA7343AP
C51 4.7
R56 1.8
LPF1
C52 4.7
R57 1.8K
R58 4.7K
C63 0.01
R50 1K
C46 3.3
C47 1
R52 9.1K
5K
VR1
C49 1000P
R53 220K
C50 3.3
Q15 DTA114YS
R54 3.3K
D8 1SS131
R55 3.3K
C53 0.027
C54 0.027
LPF2
R59 4.7K
Q16 DTC114YS
D7 1SS131
R51 150
C48 470
CN3
+5V
(a)
(b)
(c)
CONTROL DATA
AUTO STOP
MUTE
R24 1.5K
Q9 2SC 2458
R25 56K
R26 10K
R27 56K
Q10 2SC 2458
L7

ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

SK...	⊗→	◇	▭	⌀	◇	▭ ▭
Varicap alignment						
FM 87.5 - 108MHz						
MW 522 - 1602kHz			531kHz	L11	*1	2.1V
LW 144 - 290kHz			146kHz	L12		2.1V
IF alignment						
AM $	1000kHz	#1	1000KHz	T2	*2	max. ↕
FM	83MHz mod = 1kHz Δf = 75kHz	#2	83MHz	T1	*3	0V ± 50mV
RF alignment						
MW $	603kHz	#1	603kHz	L10	*2	max ↕
	1404kHz		1404kHz	CT1		
LW $	146kHz		146kHz	L9		
	290kHz		290kHz	CT2		
Stereo decoder						
FM	83MHz carrier 1mV	#2	83MHz	VR1	*4	38 ± 0.06kHz

$	Mod 400Hz 30% AM
#1	see figure 1
#2	see figure 2 and 3
*1	Across TP1 and TP2 (Ground)
*2	Across speaker output
*3	Across TP3 and TP4
*4	Across TP5 and TP6 (Ground)
↕	repeat

TUNER TEST POINT



Q4
Q3
TP1
IC1
TP6
RF1
T2
T1
IC3
Q16
TP5
TP2
L11
L12
IC2
LF2
L10
CT1
L9
R49
VR1
CT2
TP3
TP4
LF1

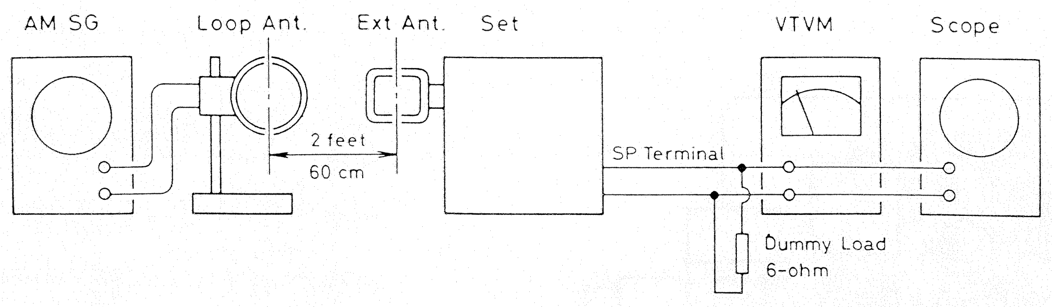

AM SG
Loop Ant.
Ext Ant.
Set
VTVM
Scope
2 feet
60 cm
SP Terminal
Dummy Load
6-ohm

Figure 1

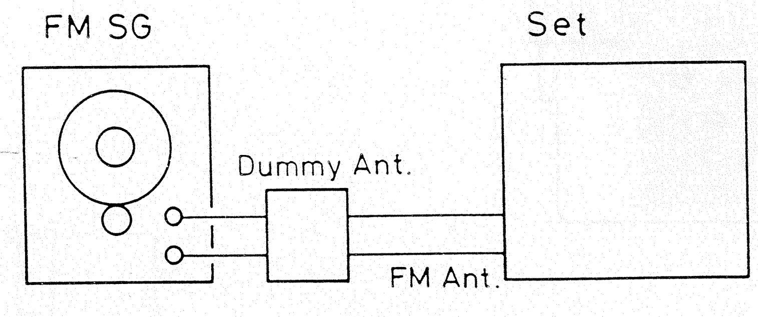
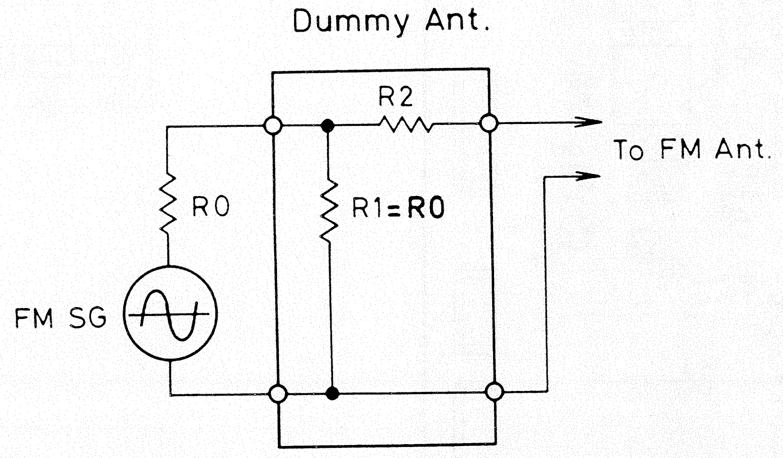

FM SG
Set
Dummy Ant.
FM Ant.

Figure 2

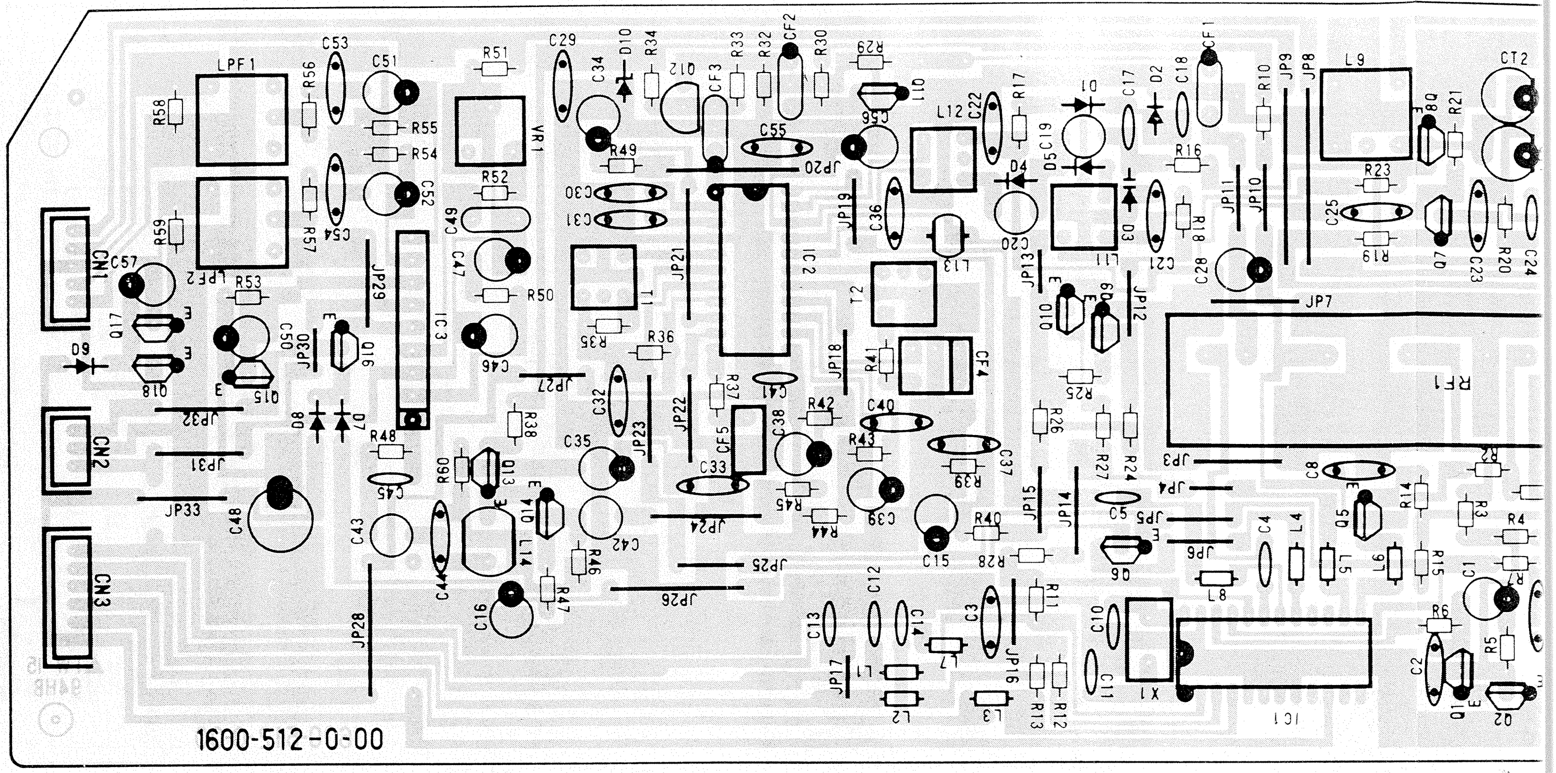

Dummy Ant.
R2
To FM Ant.
R0
R1=R0
FM SG

$R2 = 75\Omega - \frac{RO}{2}$; RO = Output impedance of SG

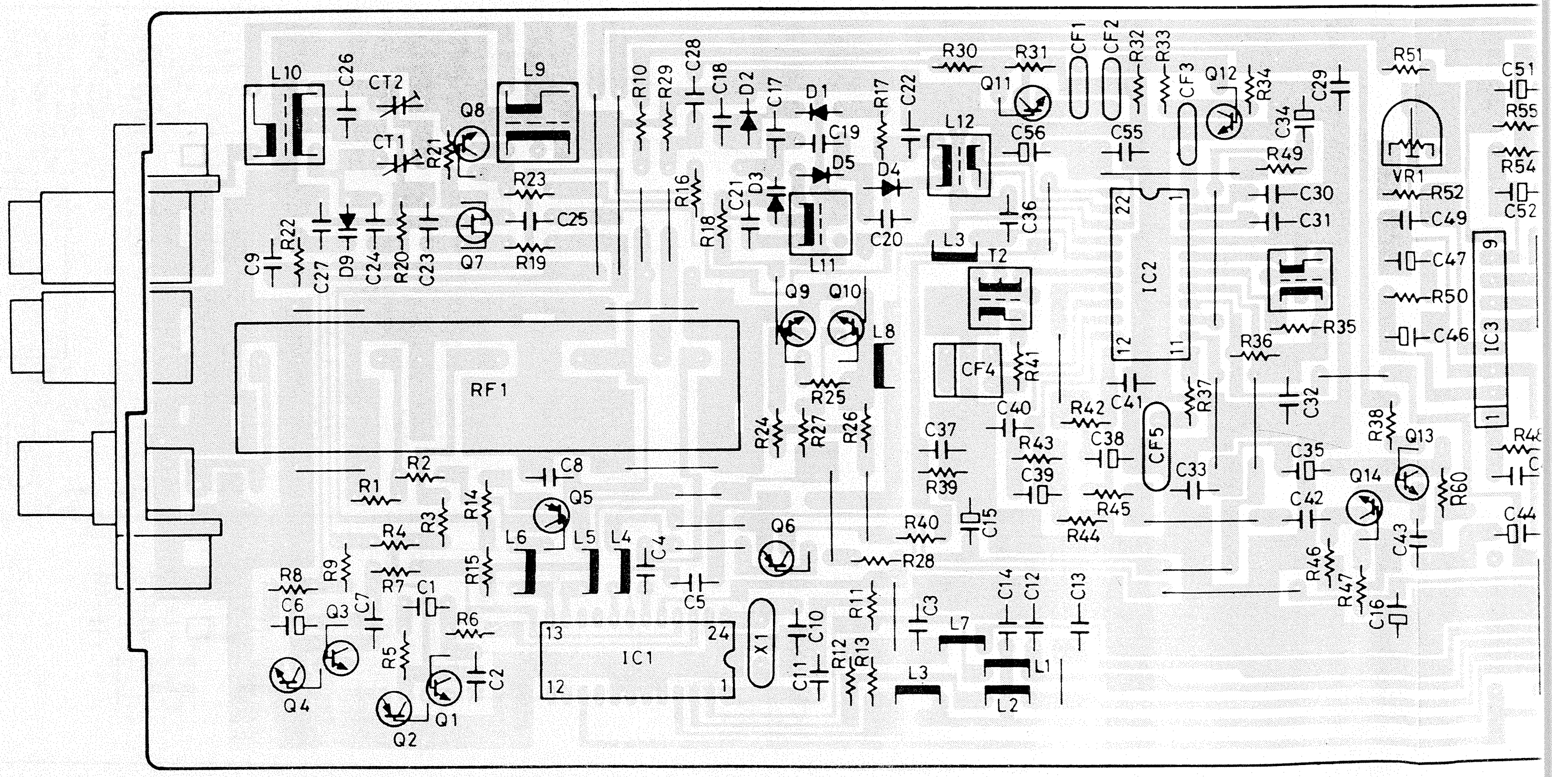
Figure 3

TUNER PCB

(Component Side)


1600-512-0-00
CN1
CN2
CN3
IC1
IC2
IC3
RF1

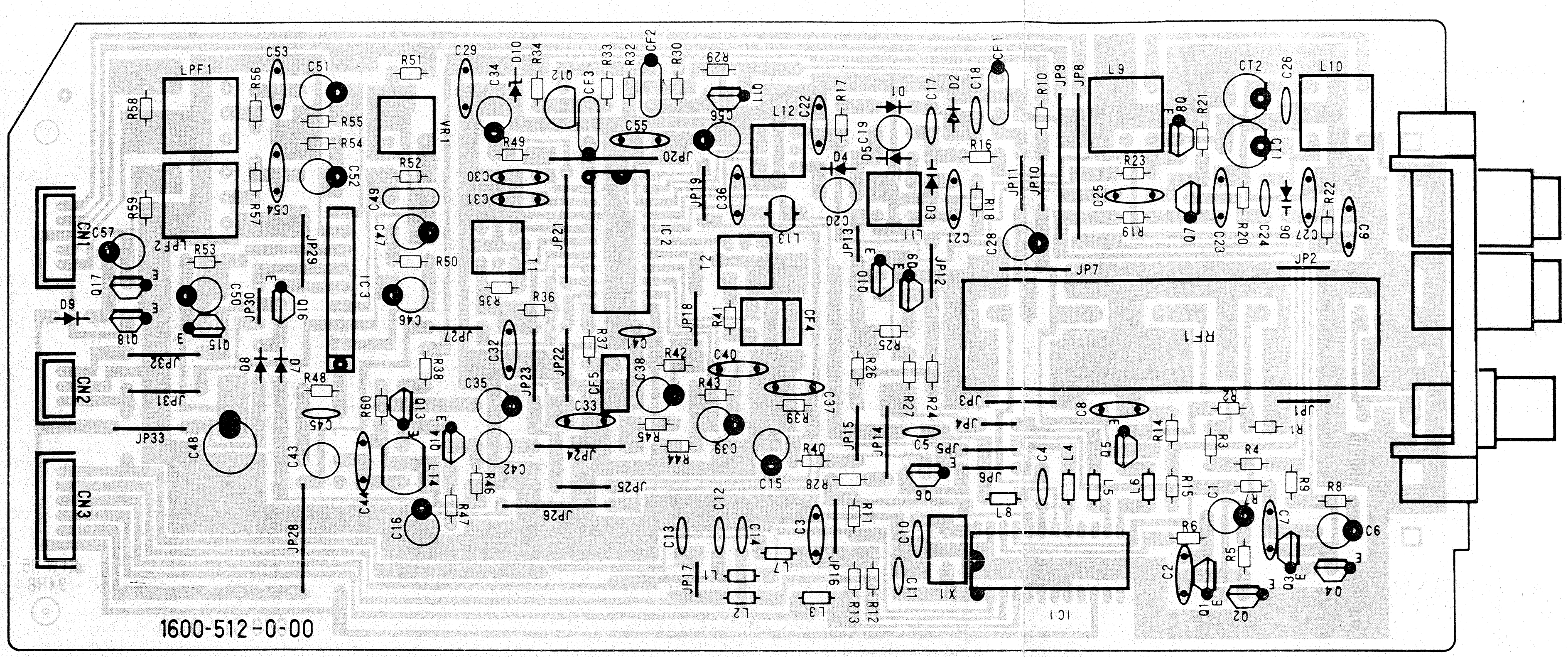
(Track Side)


RF1
IC1
IC2
IC3
VR1
X1

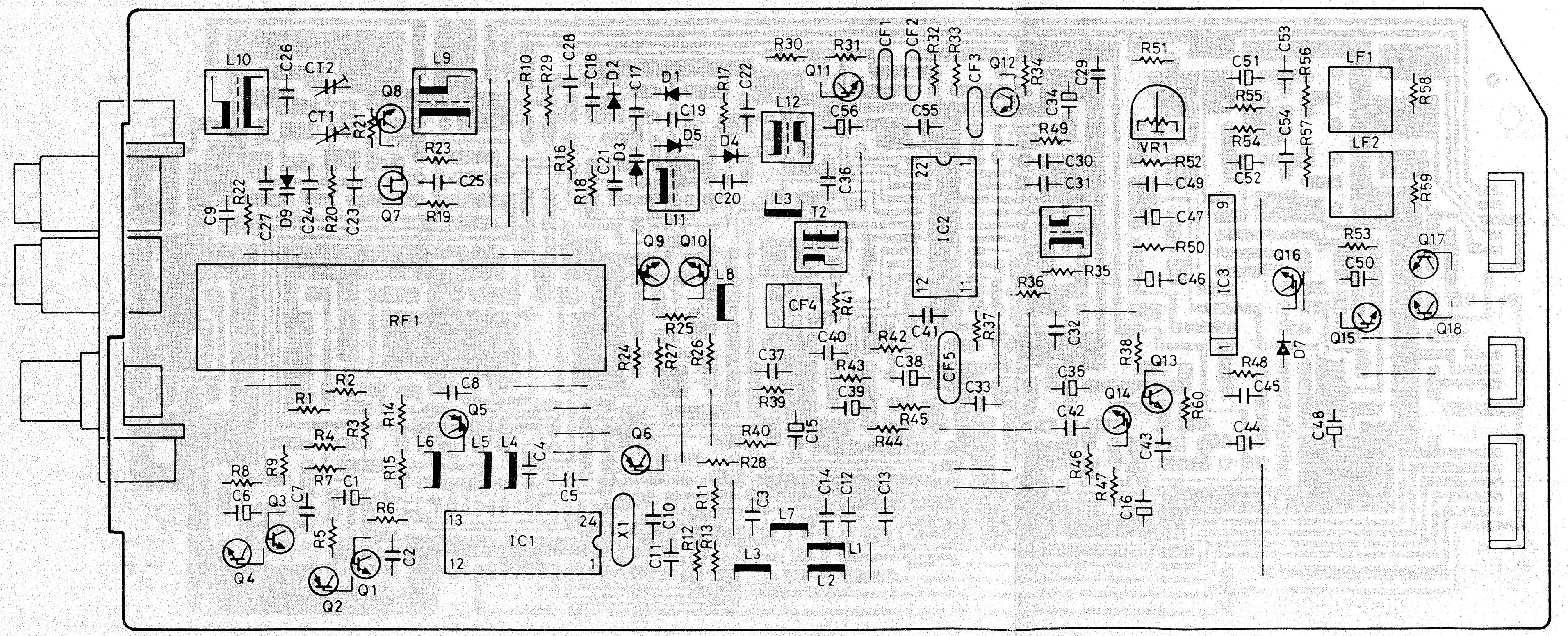
cope

TUNER PCB

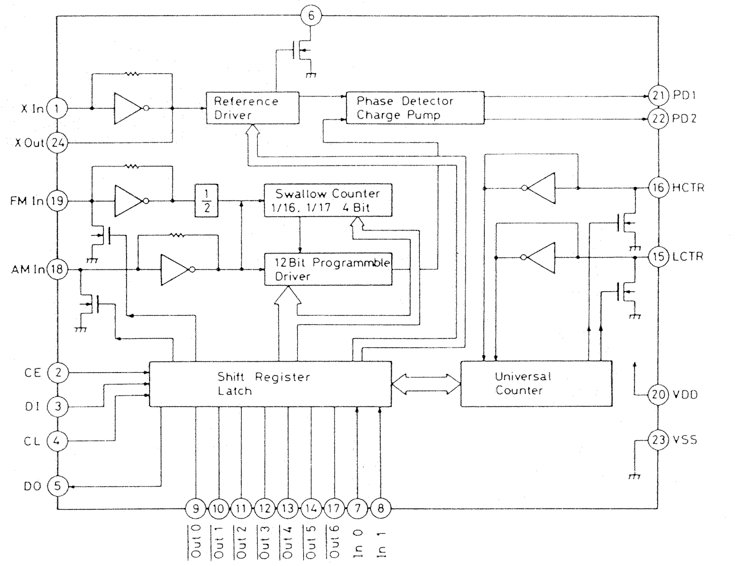
(Component Side)


LPF1
LPF2
CN1
CN2
CN3
IC1
IC2
IC3
RF1
VR1
X1
JP7
JP2
1600-512-0-00

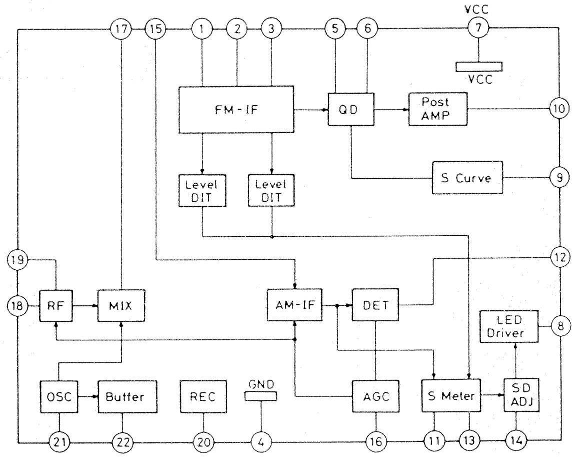
(Track Side)


L10
L9
RF1
IC1
IC2
IC3
VR1
LF1
LF2
CF4
CF5
T2
X1

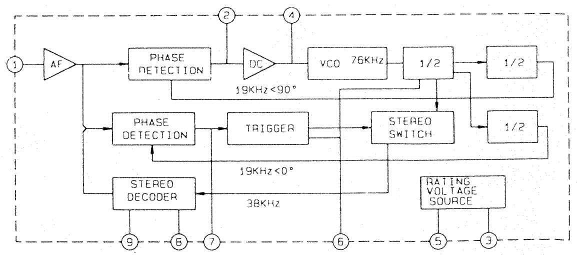
IC 1: LC7218


5YC
X In
X Out
FM In
AM In
CE
DI
CL
DO
Reference Driver
Phase Detector Charge Pump
1/2
Swallow Counter 1/16, 1/17 4 Bit
12Bit Programmble Driver
Shift Register Latch
Universal Counter
PD1
PD2
HCTR
LCTR
VDD
VSS
Out 0
Out 1
Out 2
Out 3
Out 4
Out 5
Out 6
In 0
In 1

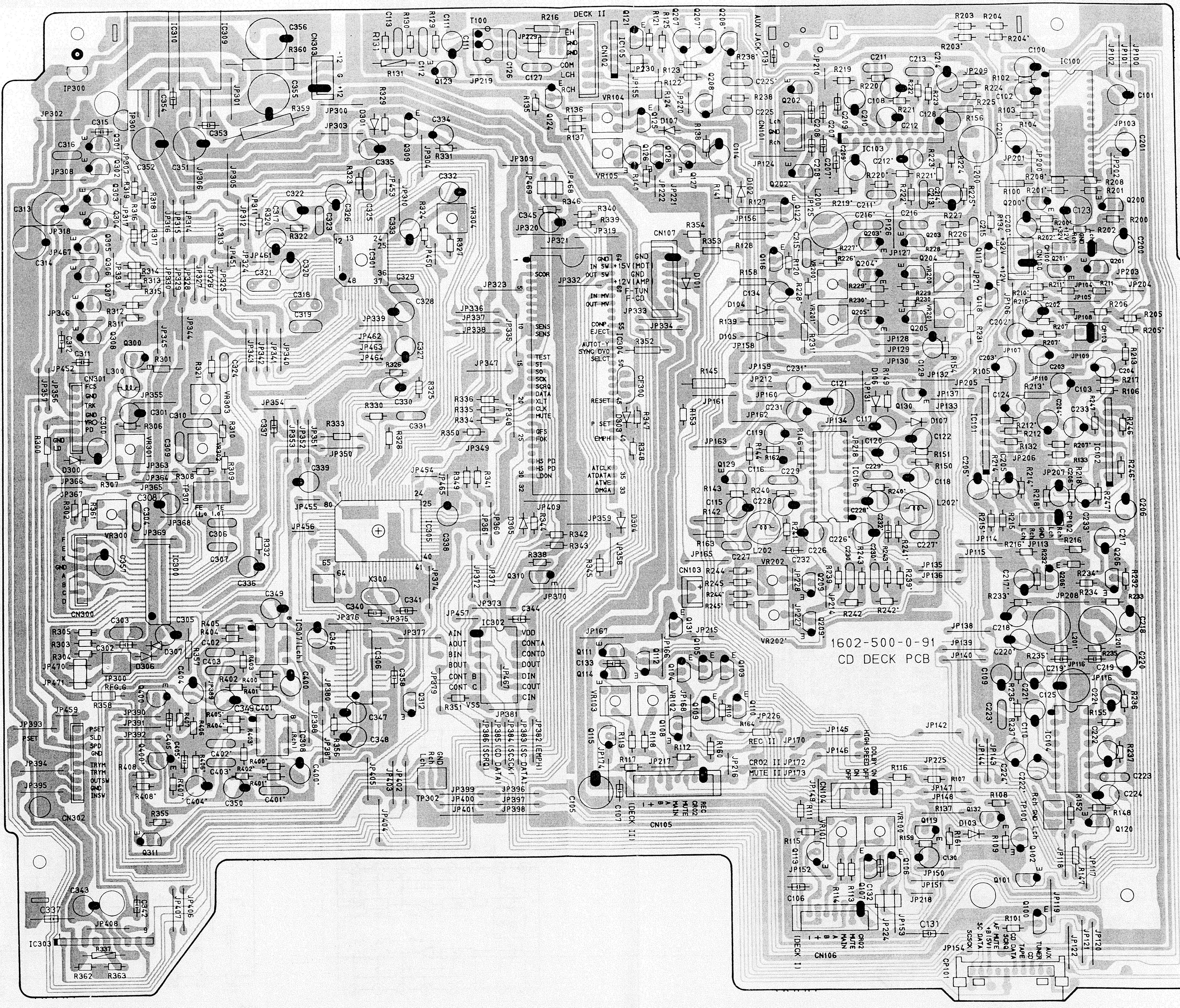
IC 2: LA1265S


VCC
VCC
FM-IF
QD
Post AMP
Level DIT
Level DIT
S Curve
RF
MIX
AM-IF
DET
LED Driver
OSC
Buffer
REC
GND
AGC
S Meter
SD ADJ

IC 3: TA7343AP


AF
PHASE DETECTION
DC
VCO 76KHz
1/2
1/2
19KHz<90°
PHASE DETECTION
TRIGGER
STEREO SWITCH
1/2
19KHz<0°
STEREO DECODER
38KHz
RATING VOLTAGE SOURCE

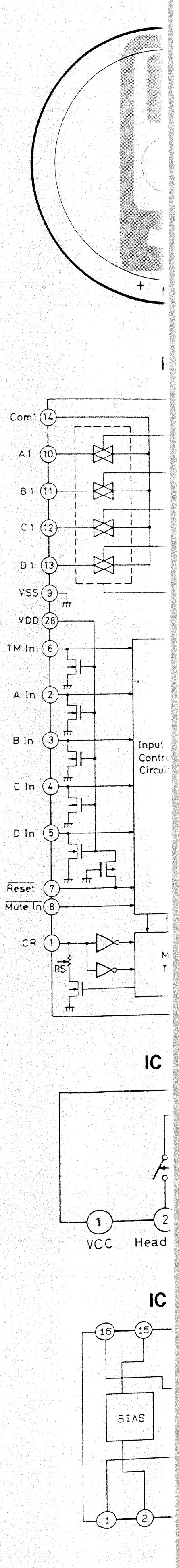
DECK/CD/PCB (Component Side)

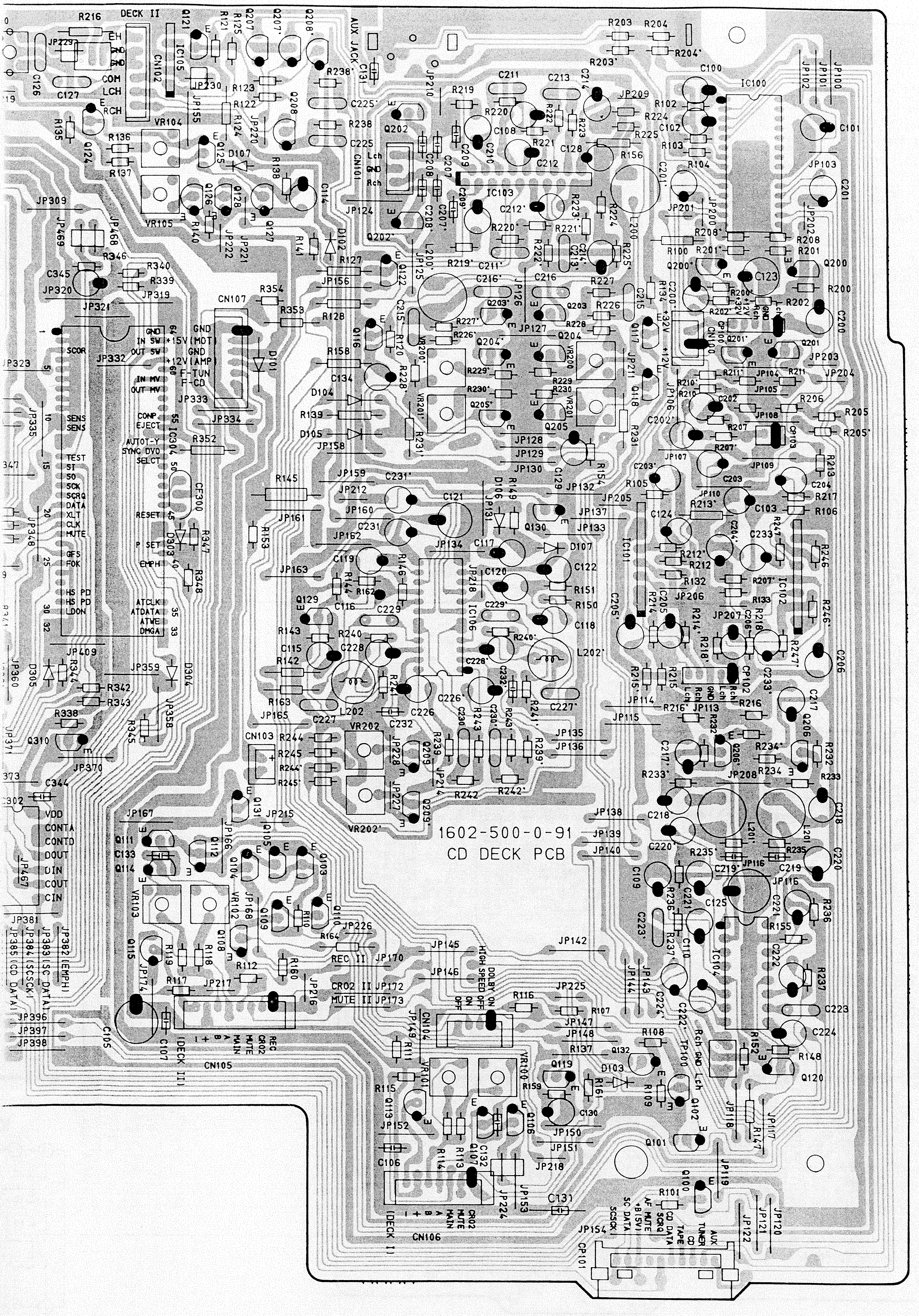

DECK II
1602-500-0-91
CD DECK PCB
DECK I
AUX JACK
IC100
IC101
IC102
IC103
IC104
IC105
IC106
IC300
IC301
IC302
IC303
IC305
IC306
IC307
IC308
IC309
IC310
CN100
CN101
CN102
CN103
CN104
CN105
CN106
CN107
CN300
CN301
CN302
CN303
CP101
X300
T100
TP300
TP301
TP302

1602—500—0

MOTOR P

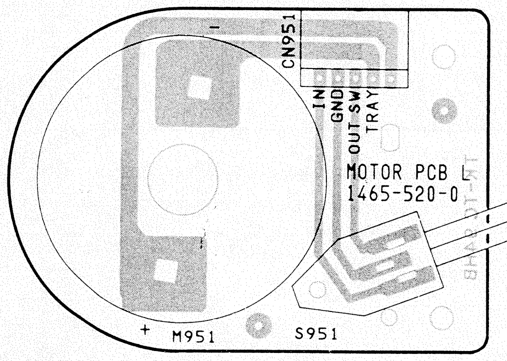
Comp


Com1 14
A1 10
B1 11
C1 12
D1 13
VSS 9
VDD 28
TM In 6
A In 2
B In 3
C In 4
D In 5
Reset 7
Mute In 8
CR 1
Input
Contr
Circu
IC
1
2
VCC
Head
IC
15
BIAS


1602-500-0-91
CD DECK PCB
DECK II
AUX JACK
IC100
IC101
IC102
IC103
IC104
IC105
IC106
CN101
CN102
CN103
CN104
CN105
CN106
CN107
VR103
VR104
VR105
DECK I
HIGH SPEED DUB
DOLBY ON OFF
REC II
MUTE II
CR02 II

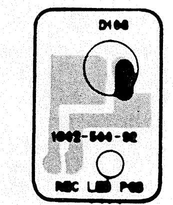
MOTOR PCB

Component Side

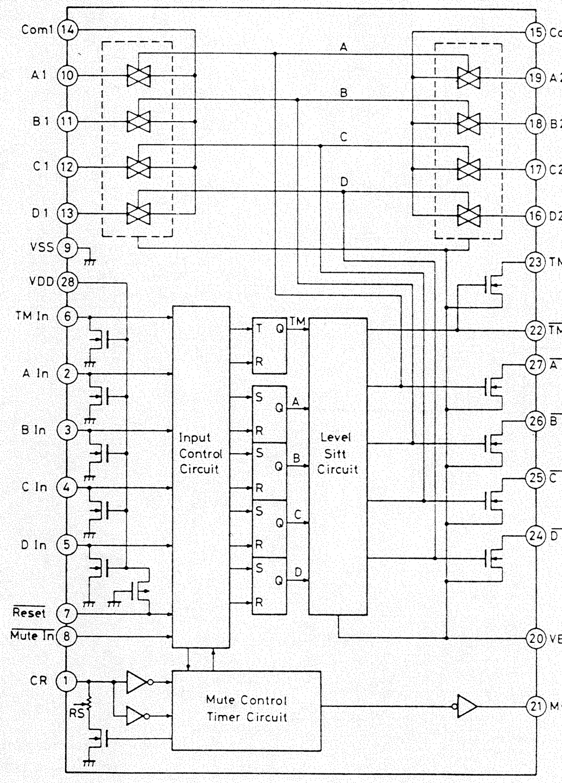

CN951
IN
GND
OUT SW
TRAY
MOTOR PCB L
1465-520-0
+
M951
S951

REC LED PCB

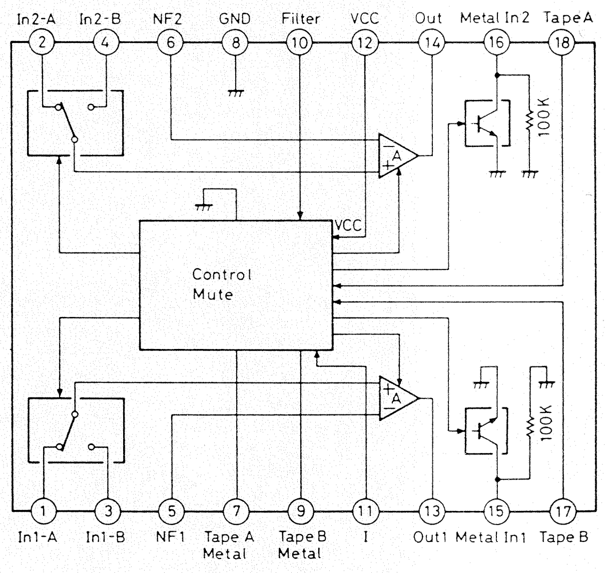
Component Side


D100
1602-500-92
REC LED PCB

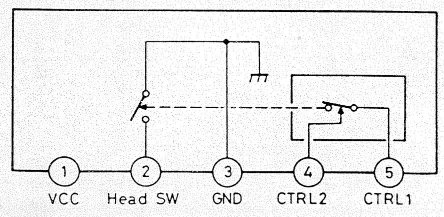
IC 100: LC7815


Com1 14
A1 10
B1 11
C1 12
D1 13
VSS 9
VDD 28
TM In 6
A In 2
B In 3
C In 4
D In 5
Reset 7
Mute In 8
CR 1
R5
15 Com2
19 A2
18 B2
17 C2
16 D2
23 TM Out
22 TM CTL
27 A Out
26 B Out
25 C Out
24 D Out
20 VEE
21 Mute
A
B
C
D
Input Control Circuit
Level Sift Circuit
Mute Control Timer Circuit

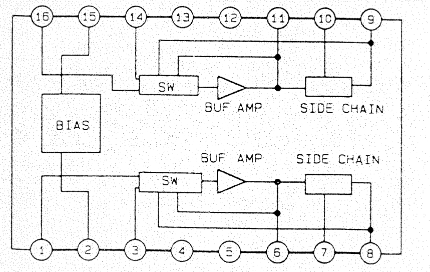
IC 103: BA3416BL


In2-A 2
In2-B 4
NF2 6
GND 8
Filter 10
VCC 12
Out 14
Metal In2 16
Tape A 18
Control
Mute
VCC
A
100K
100K
1 In1-A
3 In1-B
5 NF1
7 Tape A Metal
9 Tape B Metal
11 I
13 Out1
15 Metal In1
17 Tape B

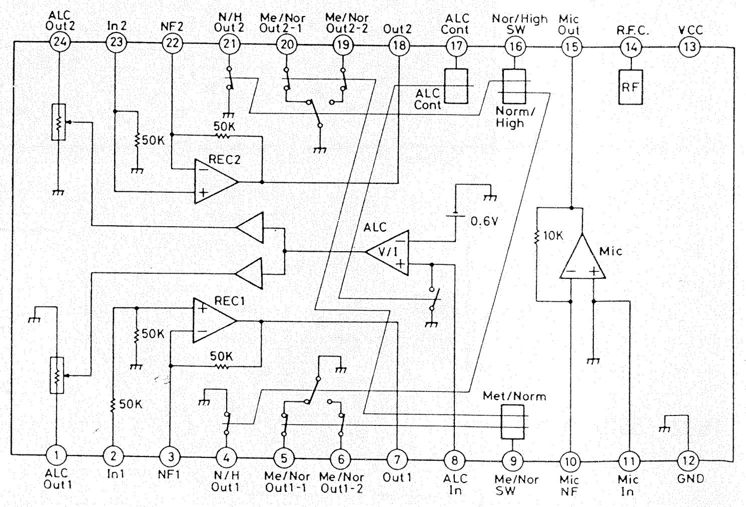
IC 105: BA7755A


1 VCC
2 Head SW
3 GND
4 CTRL2
5 CTRL1

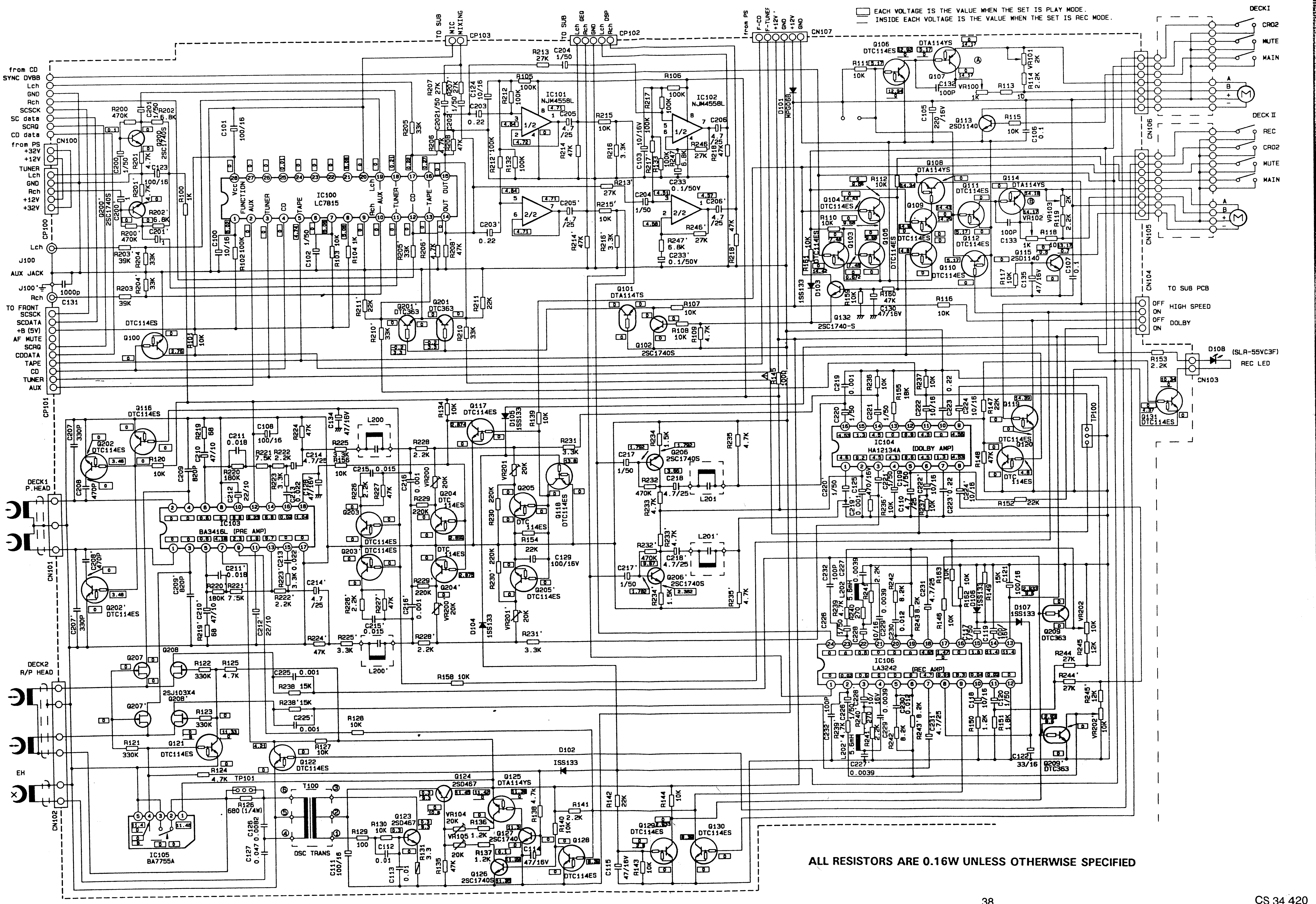
IC 104: HA12134A


16
15
14
13
12
11
10
9
SW
BUF AMP
SIDE CHAIN
BIAS
BUF AMP
SIDE CHAIN
SW
1
2
3
4
5
6
7
8

IC 106: LA3242


ALC Out2 24
In2 23
NF2 22
N/H Out2 21
Me/Nor Out2-1 20
Me/Nor Out2-2 19
Out2 18
ALC Cont 17
Nor/High SW 16
Mic Out 15
R.F.C. 14
VCC 13
ALC Cont
Norm/High
RF
50K
50K
REC2
ALC
V/I
0.6V
10K
Mic
50K
REC1
50K
50K
Met/Norm
1 ALC Out1
2 In1
3 NF1
4 N/H Out1
5 Me/Nor Out1-1
6 Me/Nor Out1-2
7 Out1
8 ALC In
9 Me/Nor SW
10 Mic NF
11 Mic In
12 GND

SCHEMATIC DIAGRAM, DECK



CP103
TO SUB
MIC MIXING
CP102
Lch
GEQ
GND
Rch
DSP
CN107
from PS
F-CD
F-TUNER
+12V
GND
+12V
GND
from CD
SYNC DVBB
Lch
GND
Rch
SCSCK
SC data
SCRQ
CD data
from PS
+32V
+12V
TUNER
Lch
GND
Rch
+12V
+32V
CN100
CP100
J100
AUX JACK
TO FRONT
SCSCK
SCDATA
+B (5V)
AF MUTE
SCRQ
CDDATA
TAPE
CD
TUNER
AUX
CP101
IC100
LC7815
IC101
NJM4558L
IC102
NJM4558L
IC103
BA3416L (PRE AMP)
IC104
HA12134A (DOLBY AMP)
IC105
BA7755A
IC106
LA3242 (REC AMP)
DECK1
P.HEAD
DECK2
R/P HEAD
EH
CN101
CN102
CN103
CN104
CN105
CN106
DECKI
CRO2
MUTE
MAIN
DECK II
REC
CRO2
MUTE
MAIN
TO SUB PCB
OFF
ON
HIGH SPEED
OFF
ON
DOLBY
D108
(SLR-55VC3F)
REC LED
R153
2.2K
TP100
TP101
T100
OSC TRANS
L200
L200'
L201
L201'
D101
MPG06B
D102
1SS133
D103
1SS133
D104
1SS133
D105
1SS133
D107
1SS133
Q100
DTC114ES
Q101
DTA114TS
Q102
2SC1740S
Q106
DTC114ES
DTA114YS
Q107
Q108
DTA114YS
Q111
DTC114ES
Q114
DTA114YS
Q113
2SD1140
Q115
2SD1140
Q116
DTC114ES
Q117
DTC114ES
Q119
Q120
DTC114ES
Q131
DTC114ES
Q132
2SC1740-S
Q200
2SC1740S
Q201
DTC363
Q202
DTC114ES
Q206
2SC1740S
Q207
2SJ103X4
Q208
Q121
DTC114ES
Q122
DTC114ES
Q123
2SD467
Q124
2SD467
Q125
DTA114YS
Q126
2SC1740S
Q127
2SC1740
Q128
DTC114ES
Q129
DTC114ES
Q130
DTC114ES
Q209
DTC363
VR100
VR101
VR102
VR103
VR104
VR200
VR201
VR202

☐ EACH VOLTAGE IS THE VALUE WHEN THE SET IS PLAY MODE.

— INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS REC MODE.

ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

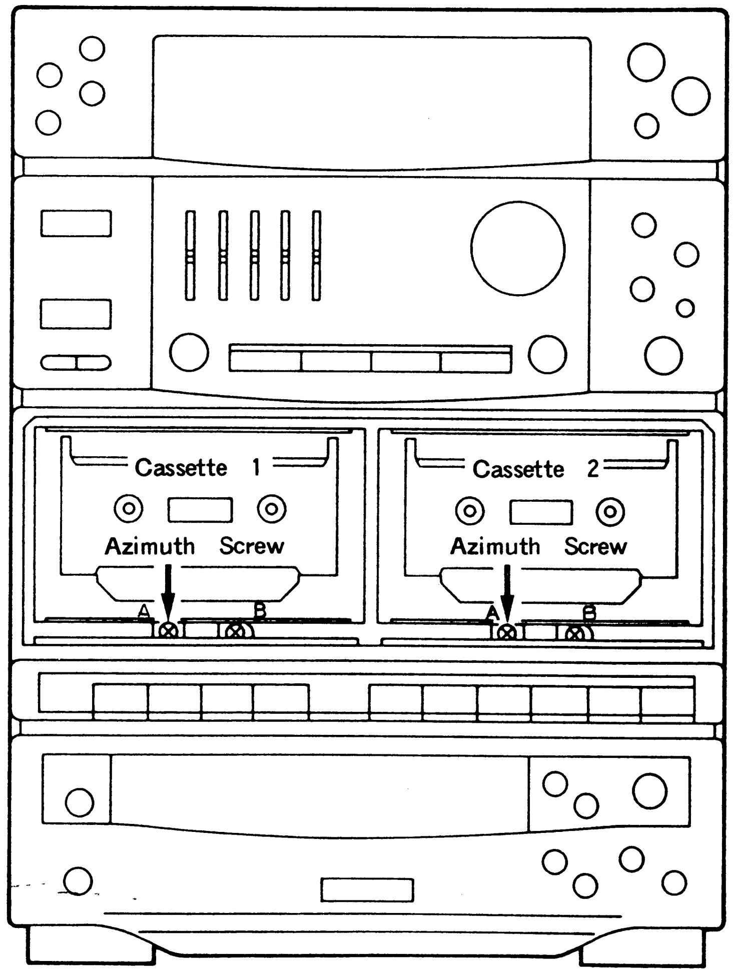


Figure 1

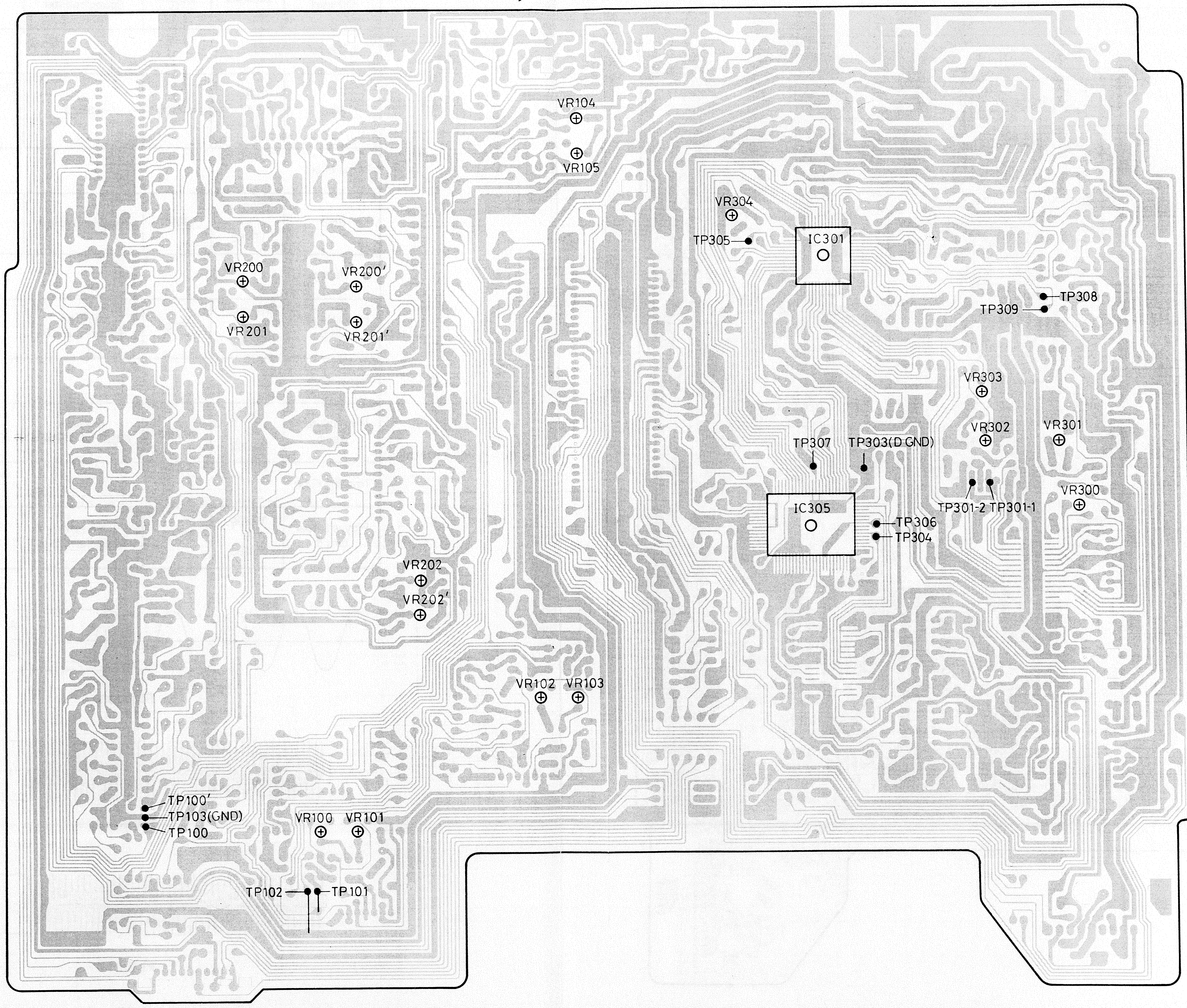
ADJUSTMENT	CASSETTE	SK...	TAPE DECK POSITION	READ ON	ADJUST WITH	ADJUST TO
Azimuth	8kHz SBC 420*	Tape	Play fwd	mV-meter *1	Screw A	Max. L = R
			Play rev	mV-meter *1	Screw B	
Motor speed (normal)	3150Hz SBC 420*	Tape	Play fwds	Wow and Flutter meter *1	VR101 (VR103)	**a
Motor speed (high)		Tape	Play fwd	Wow and flutter meter *1 Frequency Counter *2	VR100 (VR102)	**b 6360Hz ±120Hz

*	SBC 420 : 4822 397 30071
**a	The maximum permissible speed deviation is 2%. Moreover, the wow and flutter value can be read. This value should not exceed 0.35%.
**b	TP101 and TP102 should be shorted during adjustment .
*1	Connected across the speaker terminals.
*2	Across TP100 (L ch), TP100' (R ch) and TP103 (GND)
(...)	For Tape deck 2 only

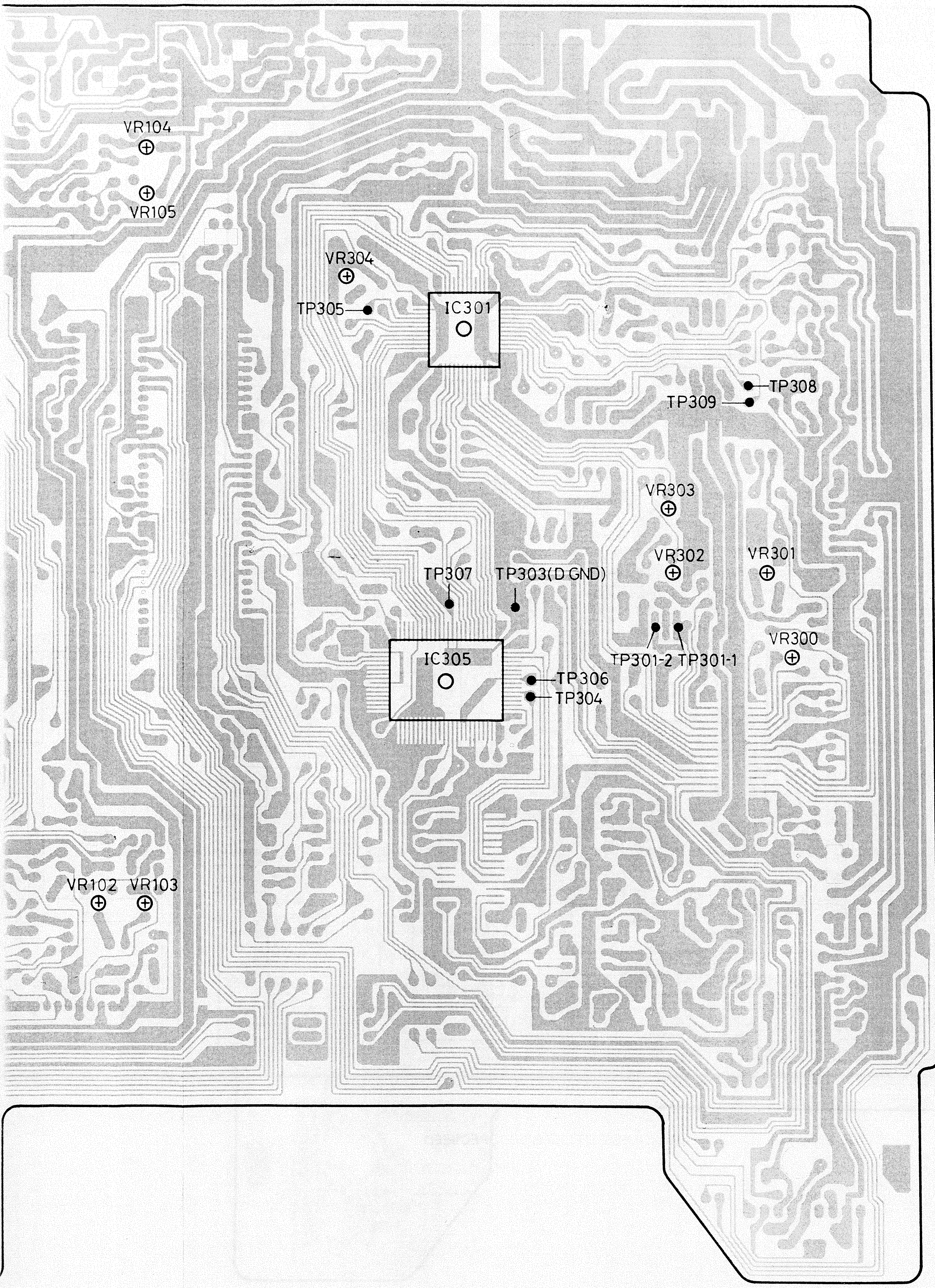
ADJUSTMENT	CASSETTE	INPUT	SK..	ADJUST WITH	READ ON	ADJUST TO
Dolby level	315Hz SBC 420*		Tape Deck1 Play Dolby off	VR200 (VR200')	mV-meter *	300mV
			Tape Deck 2 Play Dolby off	VR201 (VR201')	mV-meter *	300mV
Rec/Playback level	Blank tape (Normal)	400Hz 100mV	Tape Record Dolby off			
			Playback	VR202 (VR202')	mV-meter *	100mV
Rec/Playback frequency	Blank tape (Normal)	10kHz 32mV	Tape record Dolby off			
			Playback	VR105	mV-meter * Oscilloscope	0 ± 2 dB
	Blank tape (chrome)	10kHz 32mV	Tape Record Dolby off			
			Playback	VR104	mV-meter * Oscilloscope	0 ± 2 dB

* Across TP100 (L ch), TP100' (R ch) and TP103 (GND)
(...) For Right channel only

TAPE, CD TEST POINTS


VR104
VR105
VR304
TP305
IC301
TP308
TP309
VR200
VR200'
VR201
VR201'
VR303
VR302
VR301
TP307
TP303(D GND)
VR300
TP301-2
TP301-1
IC305
TP306
TP304
VR202
VR202'
VR102
VR103
TP100'
TP103(GND)
TP100
VR100
VR101
TP102
TP101

TAPE, CD TEST POINTS


VR104
VR105
VR304
TP305
IC301
TP308
TP309
VR303
VR302
VR301
TP307
TP303(D GND)
VR300
IC305
TP306
TP304
TP301-2
TP301-1
VR102
VR103

CD part	Measure across	Adjust with	Scope/counter	Remarks
PLL free-run frequency				
Stop	TP304 & TP303	VR304	4.3MHz	Short TP305 & TP306 via 10k. Short TP307 & TP303 via wire. Remove after adj.
Focus offset				
Stop	TP301-1 & TP303	VR301	Adjust for 0dc level	
E-F Balance				
Play with test dis 5	TP303-2 & TP303	VR300	see Fig.1 Adjust for A = B	Set VR303 full anti-clockwise
Focus Gain				
Play with test disc 5	TP308 & TP303	VR302	see fig.2 Adjust for 1.5Vp-p	
Tracking Gain				
Play with test disc 5	TP309 & TP303	VR303	see Fig.3 Adjust for 1Vp-p	

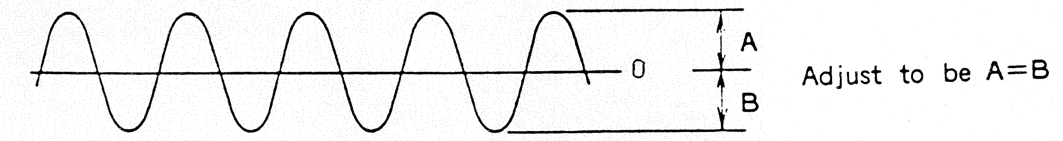

0
A
B
Adjust to be A=B

Figure 1

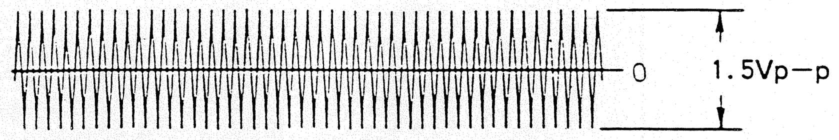


Figure 2

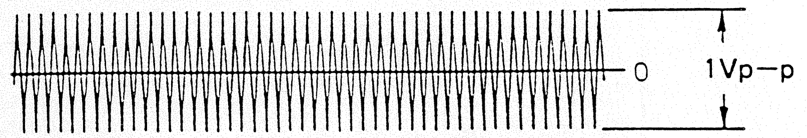
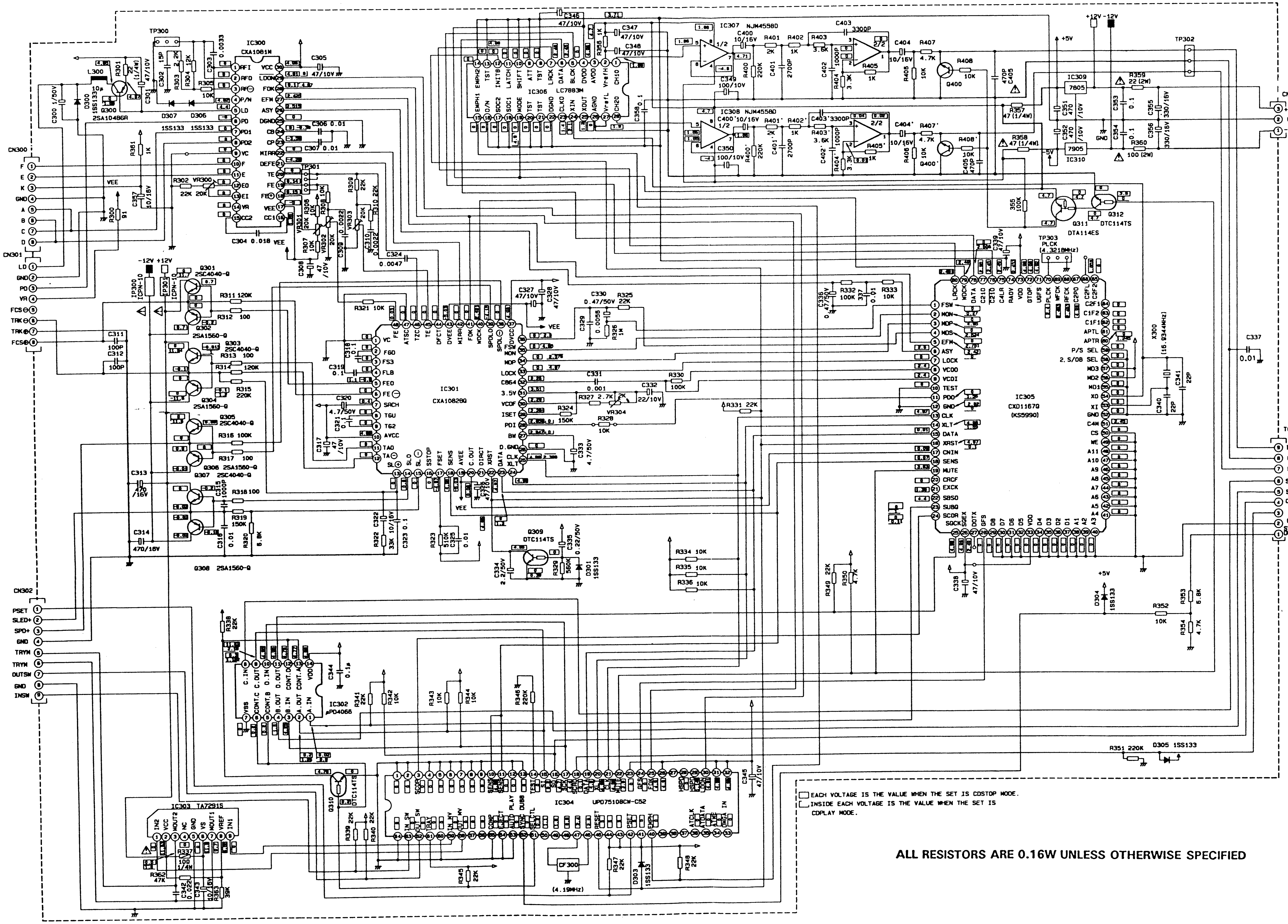


Figure 3

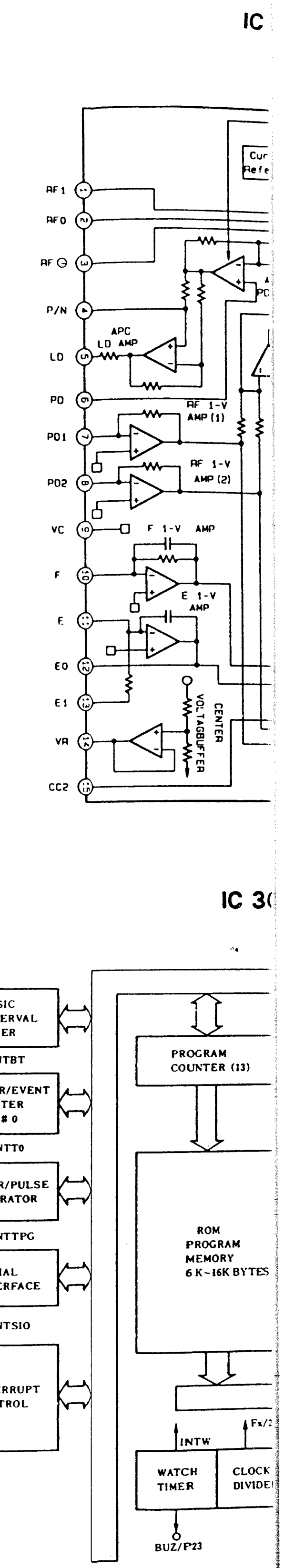
SCHEMATIC DIAGRAM, CD



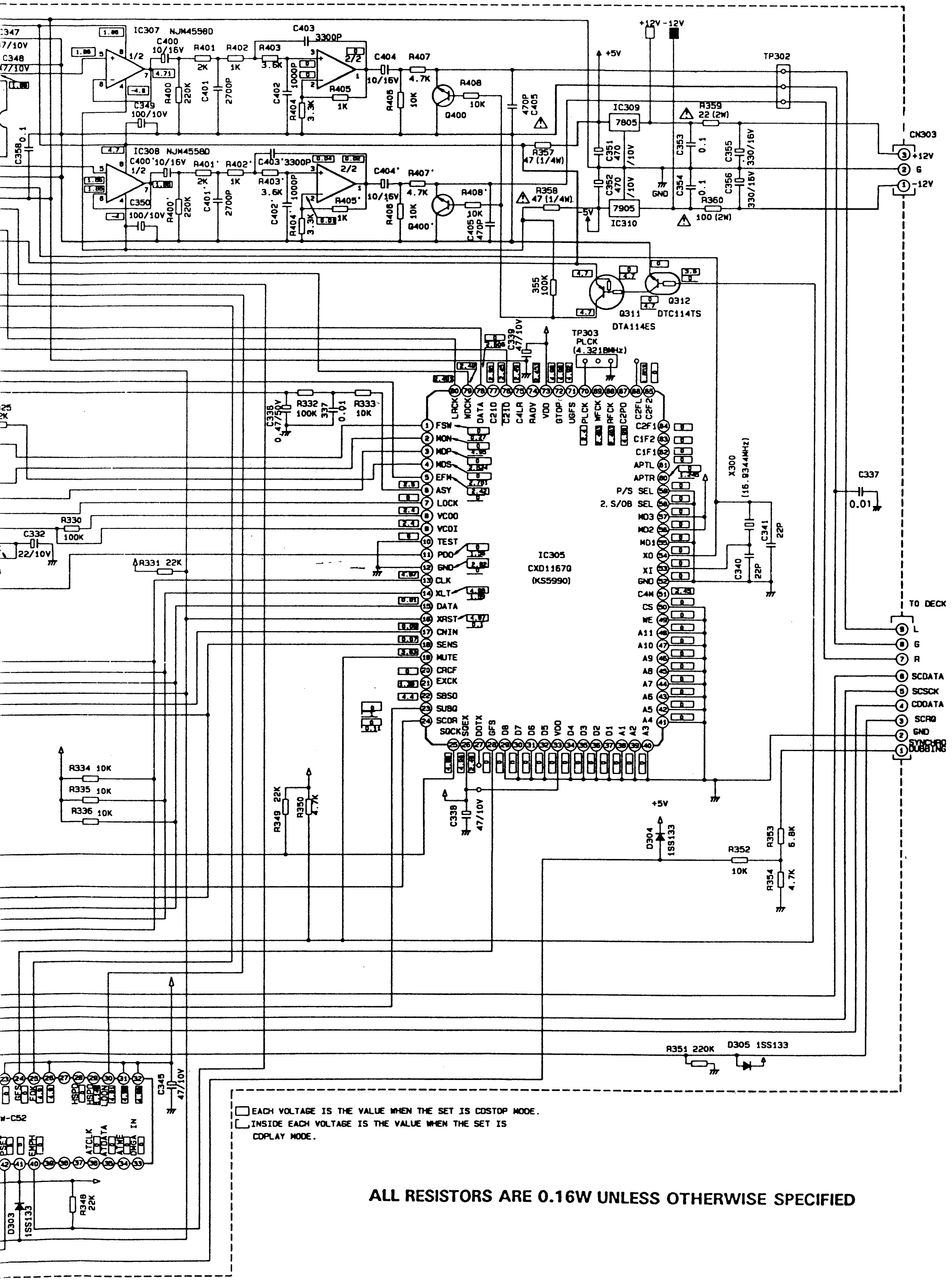
IC300 CXA1081M
IC301 CXA1082BQ
IC302 μPD4066
IC303 TA7291S
IC304 UPD75108CW-C52
IC305 CXD1167Q (KS5990)
IC306 LC7883M
IC307 NJM4558D
IC308 NJM4558D
IC309 7805
IC310 7905
CN300
CN301
CN302
CN303
TP300
TP301
TP302
TP303 PLCK (4.3218MHz)
X300 (16.9344MHz)
CF300 (4.19MHz)
TO DECK
+12V
-12V
+5V
VEE

☐ EACH VOLTAGE IS THE VALUE WHEN THE SET IS CDSTOP MODE.
☐ INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS CDPLAY MODE.

ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED



IC
IC 3
BASIC INTERVAL TIMER
TIMER/EVENT COUNTER
TIMER/PULSE GENERATOR
SERIAL INTERFACE
INTERRUPT CONTROL
PROGRAM COUNTER (13)
ROM PROGRAM MEMORY 6 K-16K BYTES
WATCH TIMER

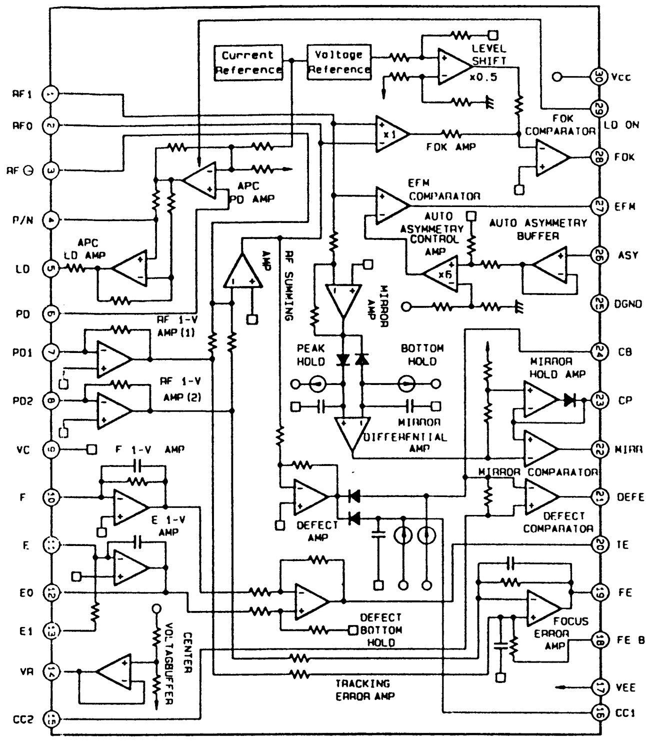

IC307 NJM4558D
IC308 NJM4558D
IC309 7805
IC310 7905
IC305 CXD1167Q (KS5990)
TP302
TP303 PLCK (4.3218MHz)
X300 (16.9344MHz)
Q311 DTA114ES
Q312 DTC114TS
Q400
D304 1SS133
D305 1SS133
D303 1SS133
R351 220K
R352 10K
R353 6.8K
R354 4.7K
CN303
+12V
G
-12V
+5V
TO DECK
L
G
R
SCDATA
SCSCK
CDDATA
SCRQ
GND
SYNCHRO DUBBING
FSW
MON
MDP
MDS
EFM
ASY
LOCK
VCOO
VCOI
TEST
PDO
GND
CLK
XLT
DATA
XRST
CNIN
SENS
MUTE
CRCF
EXCK
SBSO
SUBQ
SCOR
SQCK

☐ EACH VOLTAGE IS THE VALUE WHEN THE SET IS CDSTOP MODE.

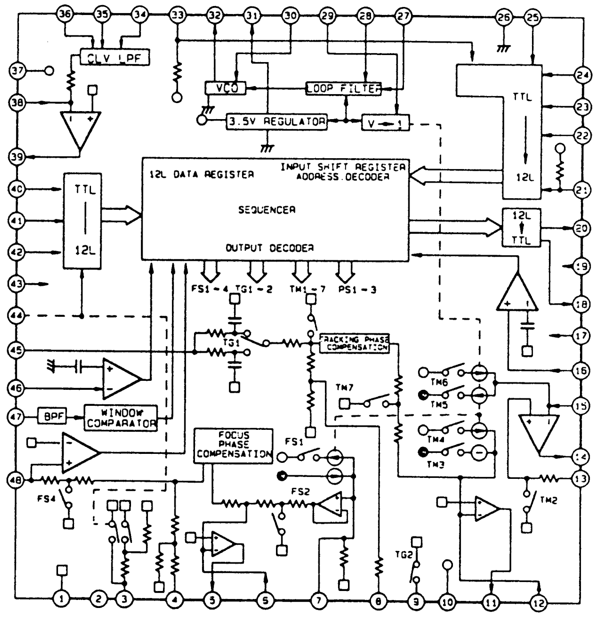
⌴ INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS CDPLAY MODE.

ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

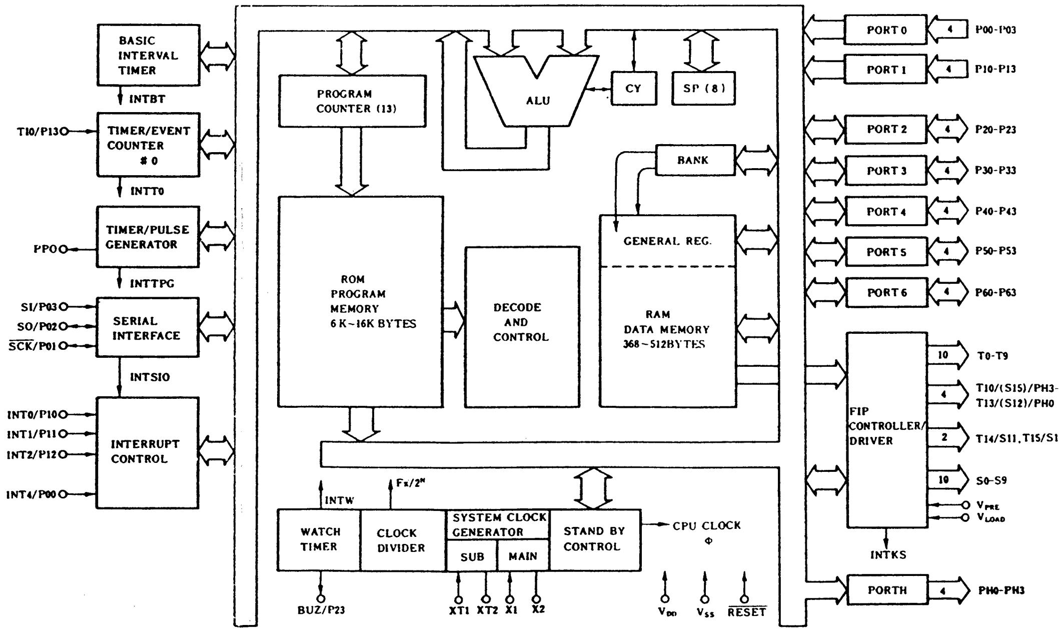
IC 300: CXA1081M


Current Reference
Voltage Reference
LEVEL SHIFT x0.5
FOK COMPARATOR
FOK AMP
APC PD AMP
APC LD AMP
EFM COMPARATOR
AUTO ASYMMETRY CONTROL AMP
AUTO ASYMMETRY BUFFER
RF SUMMING AMP
MIRROR AMP
PEAK HOLD
BOTTOM HOLD
MIRROR HOLD AMP
DIFFERENTIAL AMP
MIRROR COMPARATOR
DEFECT AMP
DEFECT COMPARATOR
DEFECT BOTTOM HOLD
F 1-V AMP
E 1-V AMP
RF 1-V AMP (1)
RF 1-V AMP (2)
CENTER VOLTAGE BUFFER
FOCUS ERROR AMP
TRACKING ERROR AMP
RF I
RF O
RF G
P/N
LD
PD
PD1
PD2
VC
F
E
EO
EI
VR
CC2
Vcc
LD ON
FOK
EFM
ASY
DGND
CB
CP
MIRR
DEFECT
IE
FE
FE BIAS
VEE
CC1

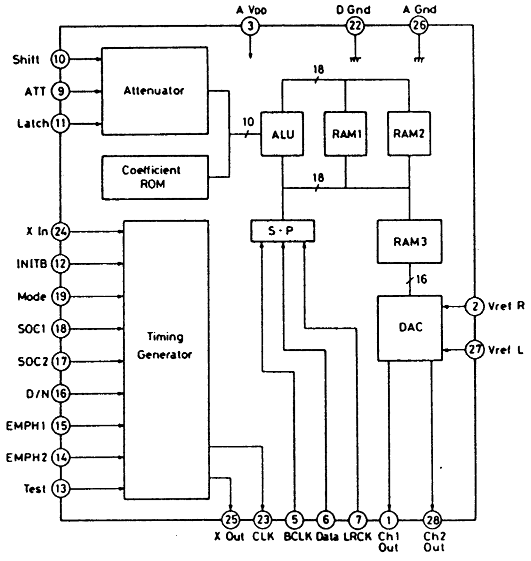
IC 301: CXA1082BQ


CLV LPF
VCO
LOOP FILTER
3.5V REGULATOR
TTL
12L
12L DATA REGISTER
INPUT SHIFT REGISTER ADDRESS DECODER
SEQUENCER
OUTPUT DECODER
FS1~4 TG1~2 TM1~7 PS1~3
TRACKING PHASE COMPENSATION
BPF
WINDOW COMPARATOR
FOCUS PHASE COMPENSATION
FS1
FS2
FS4
TG1
TG2
TM1
TM2
TM3
TM4
TM5
TM6
TM7

IC 304: UPD75108CW-52

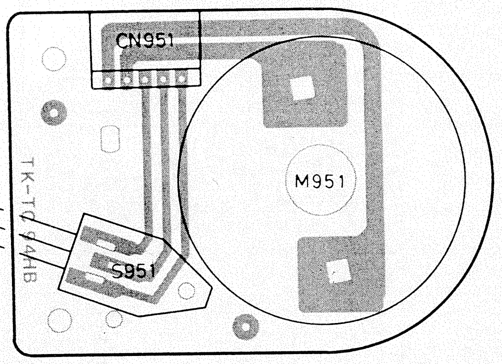

BASIC INTERVAL TIMER
INTBT
TI0/P130
TIMER/EVENT COUNTER #0
INTT0
PPO
TIMER/PULSE GENERATOR
INTTPG
SI/P03
SO/P02
SCK/P01
SERIAL INTERFACE
INTSIO
INT0/P10
INT1/P11
INT2/P12
INT4/P00
INTERRUPT CONTROL
PROGRAM COUNTER (13)
ALU
CY
SP (8)
BANK
ROM PROGRAM MEMORY 6K~16K BYTES
DECODE AND CONTROL
GENERAL REG.
RAM DATA MEMORY 368~512BYTES
INTW
fx/2^n
WATCH TIMER
CLOCK DIVIDER
SYSTEM CLOCK GENERATOR
SUB
MAIN
STAND BY CONTROL
CPU CLOCK Φ
BUZ/P23
XT1 XT2 X1 X2
VDD VSS RESET
PORT 0
PORT 1
PORT 2
PORT 3
PORT 4
PORT 5
PORT 6
P00~P03
P10~P13
P20~P23
P30~P33
P40~P43
P50~P53
P60~P63
FIP CONTROLLER/DRIVER
T0~T9
T10/(S15)/PH3~T13/(S12)/PH0
T14/S11, T15/S10
S0~S9
VPRE
VLOAD
INTKS
PORTH
PH0~PH3

IC 306: LC7883KM


A VDD
D Gnd
A Gnd
Shift
ATT
Latch
Attenuator
Coefficient ROM
ALU
RAM1
RAM2
S-P
RAM3
DAC
Timing Generator
X In
INITB
Mode
SOC1
SOC2
D/N
EMPH1
EMPH2
Test
Vref R
Vref L
X Out
CLK
BCLK
Data
LRCK
Ch1 Out
Ch2 Out

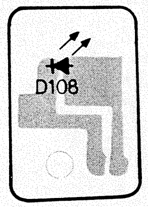
MOTOR PCB

Track Side

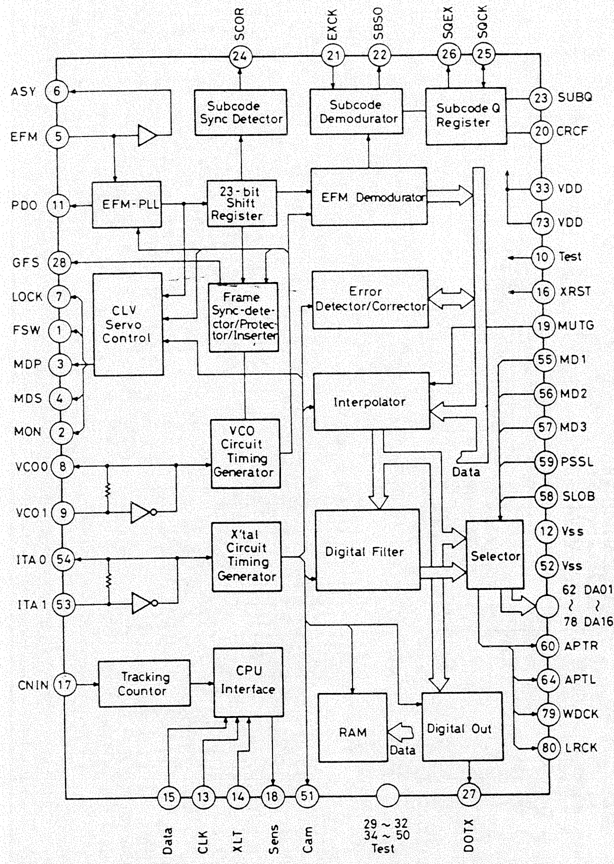

CN951
M951
S951
TK-1C44IB

REC LED PCB

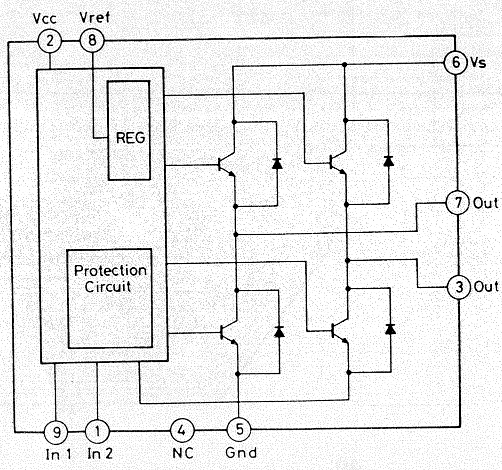
Track Side



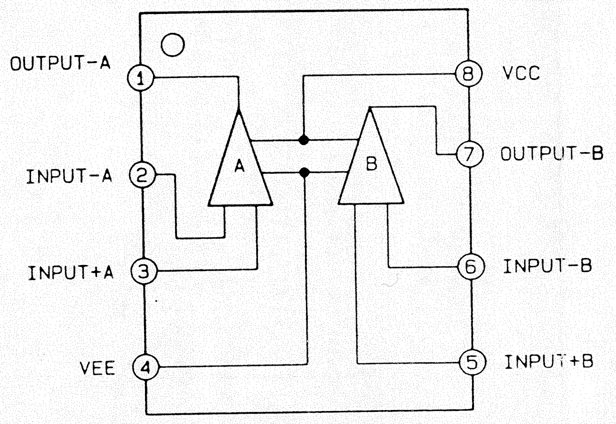
IC 305: CXD1167Q


SCOR
EXCK
SBSO
SQEX
SQCK
24
21
22
26
25
ASY 6
EFM 5
PDO 11
GFS 28
LOCK 7
FSW 1
MDP 3
MDS 4
MON 2
VCO0 8
VCO1 9
ITA0 54
ITA1 53
CNIN 17
Subcode Sync Detector
Subcode Demodurator
Subcode Q Register
EFM-PLL
23-bit Shift Register
EFM Demodurator
CLV Servo Control
Frame Sync-detector/Protector/Inserter
Error Detector/Corrector
Interpolator
VCO Circuit Timing Generator
X'tal Circuit Timing Generator
Digital Filter
Selector
Tracking Countor
CPU Interface
RAM
Digital Out
Data
Data
23 SUBQ
20 CRCF
33 VDD
73 VDD
10 Test
16 XRST
19 MUTG
55 MD1
56 MD2
57 MD3
59 PSSL
58 SLOB
12 Vss
52 Vss
62 DA01
78 DA16
60 APTR
64 APTL
79 WDCK
80 LRCK
15 Data
13 CLK
14 XLT
18 Sens
51 Cam
29 ~ 32
34 ~ 50
Test
27 DOTX

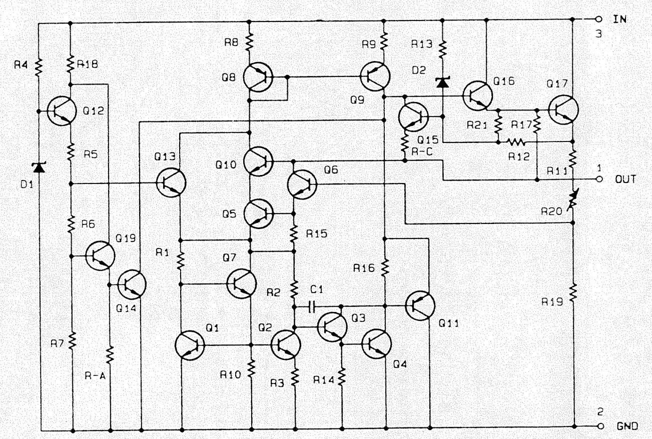
IC 303, IC 603: TA7291S


Vcc
Vref
2
8
6 Vs
REG
Protection Circuit
7 Out1
3 Out2
9
1
4
5
In 1
In 2
NC
Gnd

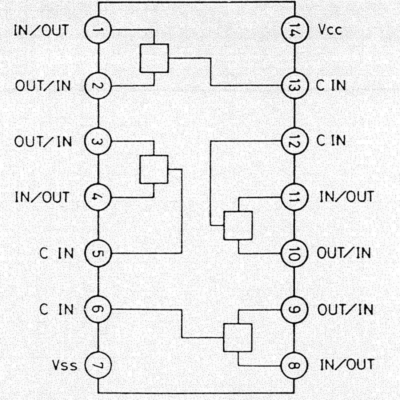
IC 307, IC 308, IC 606, IC 608: NJM4558D


OUTPUT-A 1
INPUT-A 2
INPUT+A 3
VEE 4
8 VCC
7 OUTPUT-B
6 INPUT-B
5 INPUT+B
A
B

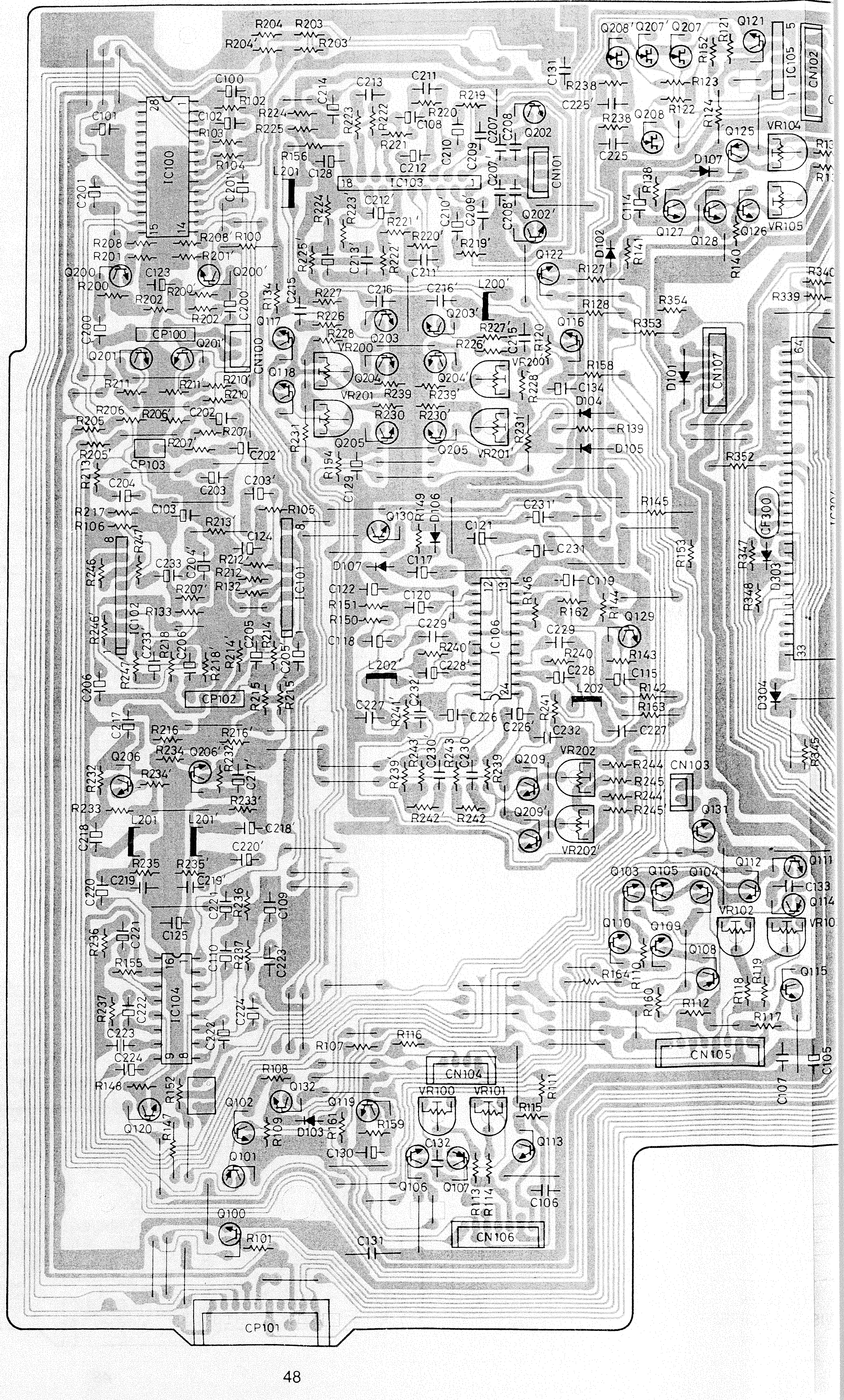
IC 309, IC310: UPC79M05H


IN
3
1 OUT
2 GND
R4
R18
Q12
R5
D1
R6
Q19
Q14
R7
R-A
R8
Q8
Q13
Q10
Q5
Q7
R1
Q1
R10
Q2
R3
R2
R15
C1
Q3
R14
Q6
R9
Q9
R13
D2
Q15
R-C
Q16
Q17
R21
R17
R12
R11
R20
R16
Q4
Q11
R19

IC 302: UPD4066BC OR TC4066BP

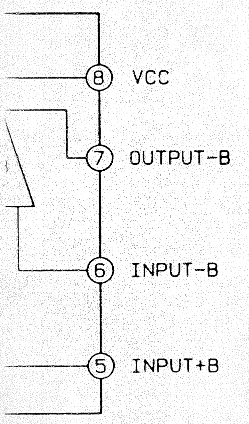

IN/OUT 1
OUT/IN 2
OUT/IN 3
IN/OUT 4
C IN 5
C IN 6
Vss 7
14 Vcc
13 C IN
12 C IN
11 IN/OUT
10 OUT/IN
9 OUT/IN
8 IN/OUT

DECK/CD PCB (Track Side)


IC100
IC101
IC102
IC103
IC104
IC105
IC106
IC107
CN101
CN102
CN103
CN104
CN105
CN106
CN107
CP100
CP101
CP102
CP103
CF300
VR100
VR101
VR102
VR104
VR105
VR200
VR201
VR202
D101
D102
D103
D104
D105
D106
D107
D303
D304
L200
L201
L202

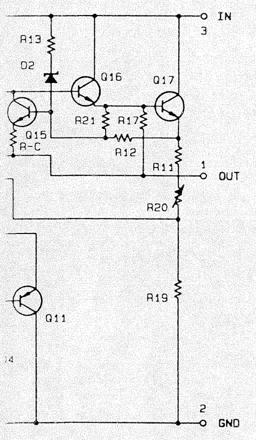
DECK/CD PCB (Track Side)

08: NJM4558D



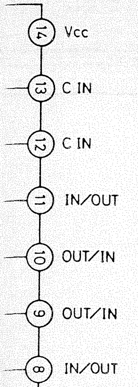
8 VCC
7 OUTPUT-B
6 INPUT-B
5 INPUT+B

MO5H

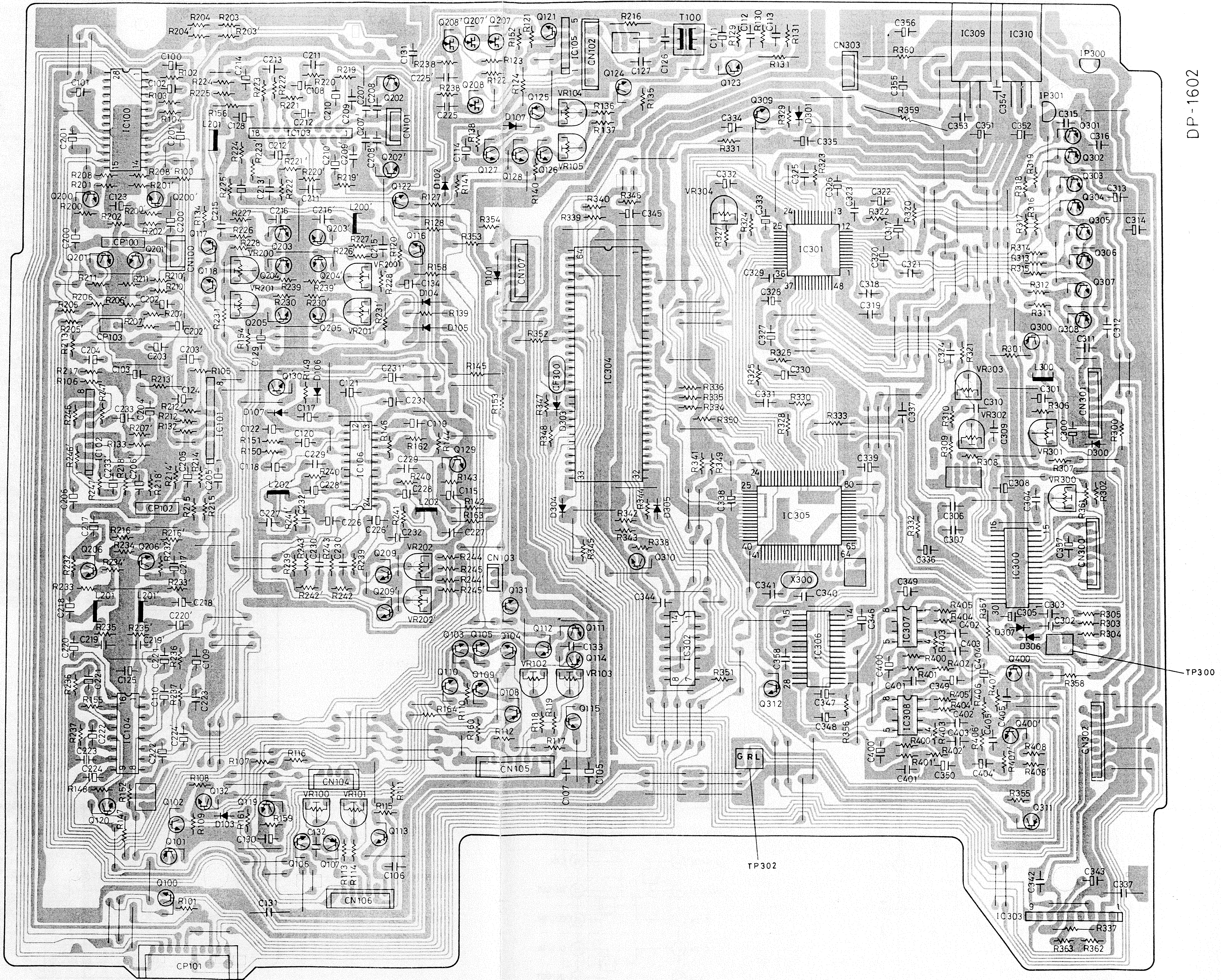


IN
3
R13
D2
Q16
Q17
R21
R17
R12
Q15
R11
1
OUT
R20
R19
Q11
2
GND

TC4066BP

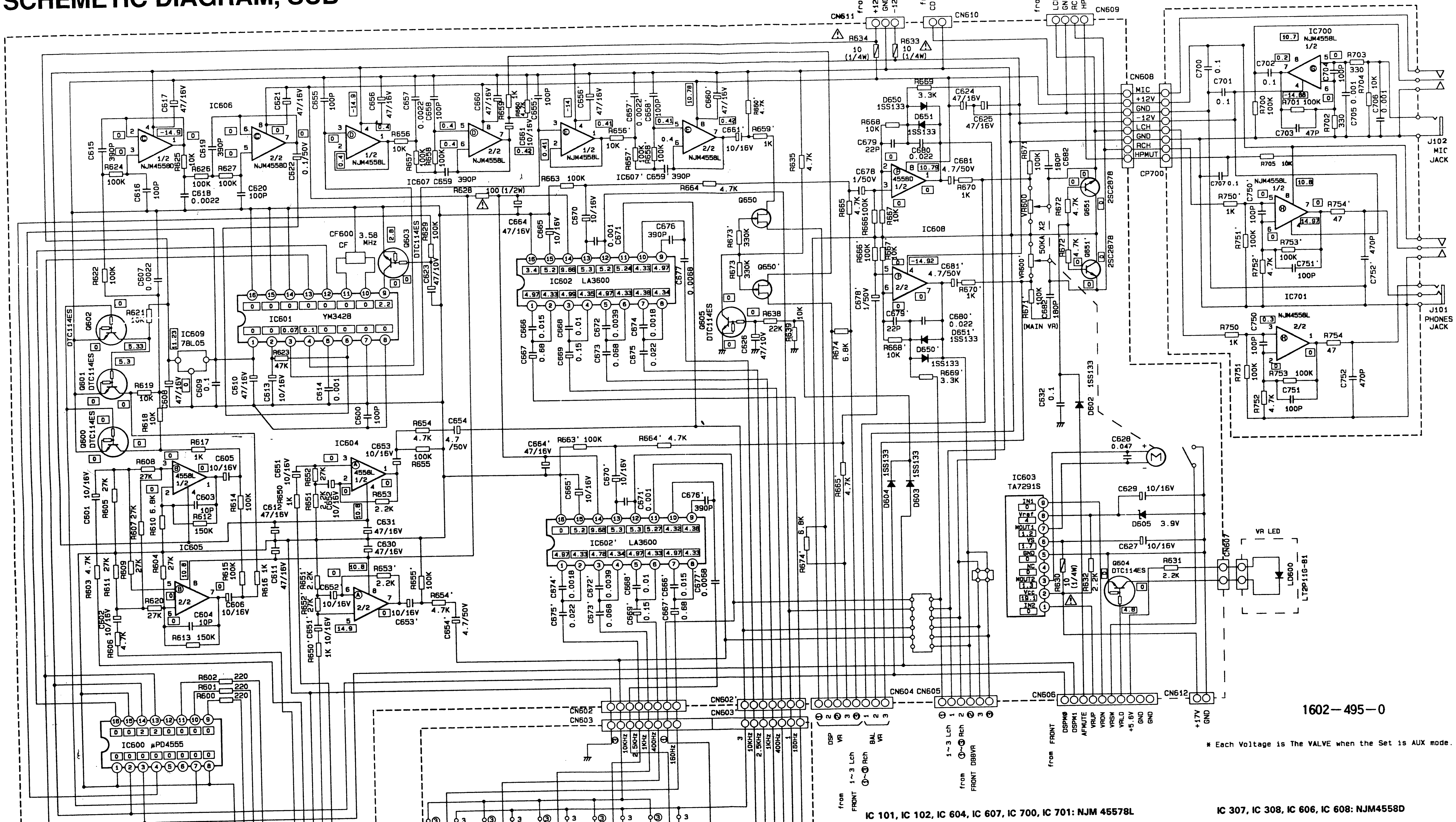


14 Vcc
13 C IN
12 C IN
11 IN/OUT
10 OUT/IN
9 OUT/IN
8 IN/OUT



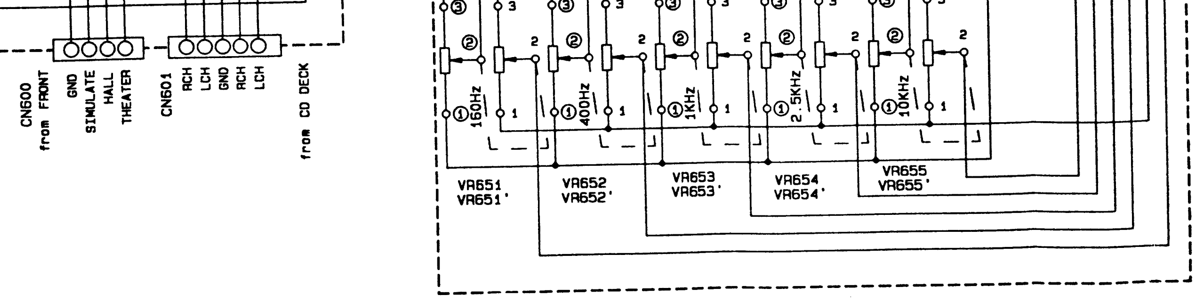
DP-1602
TP300
TP302
IC100
IC101
IC102
IC103
IC104
IC105
IC106
IC300
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC308
IC309
IC310
CN100
CN101
CN102
CN103
CN104
CN105
CN106
CN107
CN300
CN301
CN302
CN303
CP100
CP101
CP102
CP103
CF300
T100
X300
VR100
VR101
VR102
VR103
VR104
VR105
VR200
VR201
VR202
VR300
VR301
VR302
VR303
VR304
TP301
G R L

SCHEMETIC DIAGRAM, SUB


CN611 from PS +12V GND -12V
CN610 from CD DECK (MIC)
CN609 from AMP LCH GND RCH HPMUT
CN608 MIC +12V GND -12V LCH GND RCH HPMUT
CP700
IC700 NJM4558L 1/2
IC701 NJM4558L 2/2
J102 MIC JACK
J101 PHONES JACK
IC606 NJM4558D
IC607 NJM4558L
IC608 4558D
IC601 YM3428
CF600 3.58 MHz
IC609 78L05
IC602 LA3600
IC602' LA3600
IC604 4558L
IC605 4558L
IC603 TA7291S
IC600 μPD4555
Q600 DTC114ES
Q601 DTC114ES
Q602 DTC114ES
Q603 DTC114ES
Q604 DTC114ES
Q605 DTC114ES
Q650
Q650'
Q651 2SC2878
Q651' 2SC2878
VR600 50KA X2 (MAIN VR)
D650 1SS133
D651 1SS133
D602 1SS133
D603 1SS133
D604 1SS133
D605 3.9V
LD600 LT2P10-81
VR LED
CN607
CN602 CN603
CN604 CN605
CN606
CN612 +17V GND
DSP VR
BAL VR
from FRONT
from FRONT DBBVR
DSPM0 DSPM1 AFMUTE VRUP VRDN VRSW VRLO +5.6V GND GND

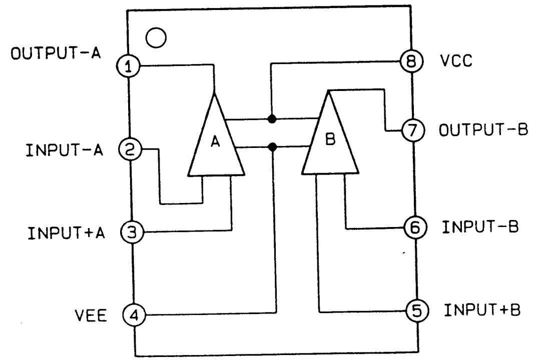
1602—495—0

* Each Voltage is The VALVE when the Set is AUX mode.

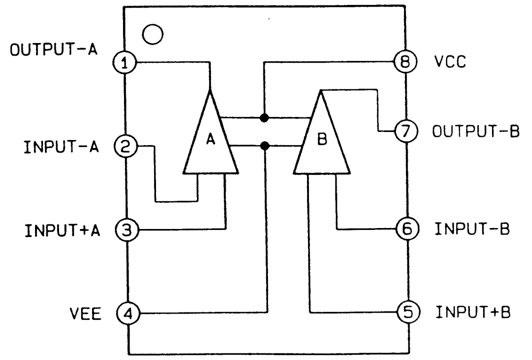

CN600 from FRONT GND SIMULATE HALL THEATER
CN601 RCH LCH GND RCH LCH from CD DECK
160Hz
400Hz
1KHz
2.5KHz
10KHz
VR651 VR651'
VR652 VR652'
VR653 VR653'
VR654 VR654'
VR655 VR655'

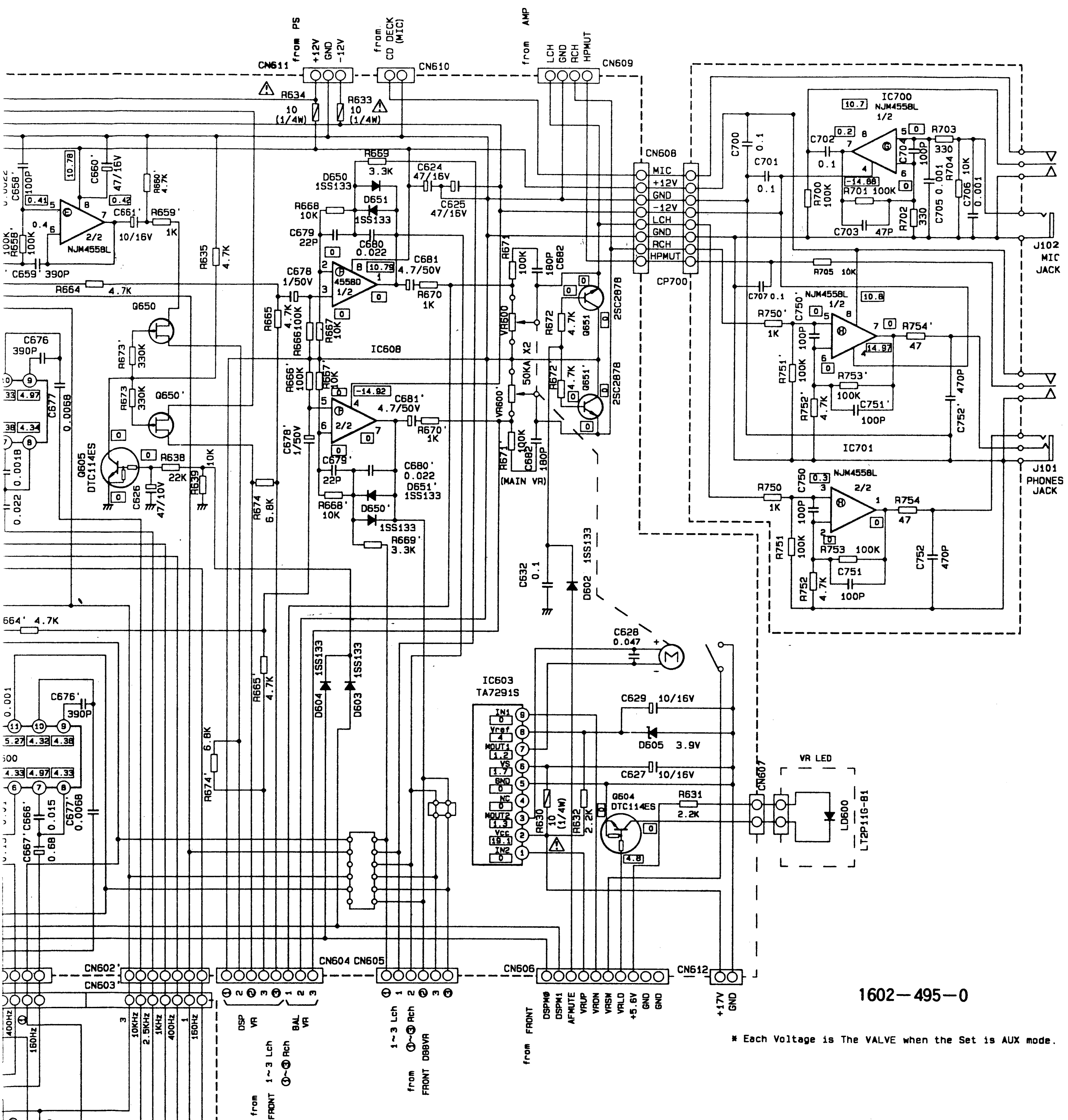
ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

IC 101, IC 102, IC 604, IC 607, IC 700, IC 701: NJM 45578L


OUTPUT-A
INPUT-A
INPUT+A
VEE
VCC
OUTPUT-B
INPUT-B
INPUT+B
A
B
1
2
3
4
5
6
7
8

IC 307, IC 308, IC 606, IC 608: NJM4558D


OUTPUT-A
INPUT-A
INPUT+A
VEE
VCC
OUTPUT-B
INPUT-B
INPUT+B
A
B
1
2
3
4
5
6
7
8

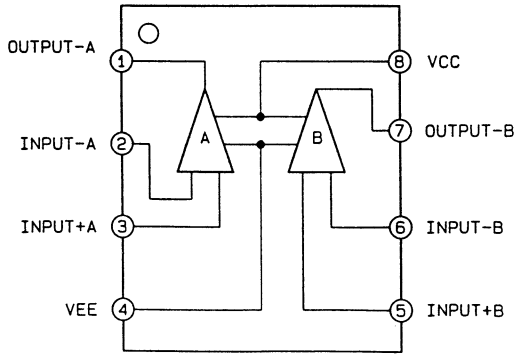

from PS
+12V
GND
-12V
CN611
from CD DECK (MIC)
CN610
from AMP
LCH
GND
RCH
HPMUT
CN609
R634 10 (1/4W)
R633 10 (1/4W)
IC700 NJM4558L 1/2
C700 0.1
C701 0.1
R703 330
R704 10K
C705 0.001
C706 0.001
R700 100K
R701 100K
R702 330
C703 47P
C702 0.1
CN608
MIC
+12V
GND
-12V
LCH
GND
RCH
HPMUT
CP700
J102 MIC JACK
J101 PHONES JACK
R705 10K
C707 0.1
R750' 1K
C750' 100P
R751' 100K
R752' 4.7K
R753' 100K
C751' 100P
R754' 47
C752' 470P
IC701
NJM4558L 2/2
R750 1K
C750 100P
R751 100K
R752 4.7K
R753 100K
C751 100P
R754 47
C752 470P
R659 3.3K
D650 1SS133
D651 1SS133
C624 47/16V
C625 47/16V
R668 10K
C679 22P
C680 0.022
C681 4.7/50V
C678 1/50V
IC608
45580 1/2
R670 1K
R671 100K
C682 180P
VR600
R672 4.7K
Q651 2SC2878
50KA X2
[MAIN VR]
R665 4.7K
R666 100K
R667 10K
C681' 4.7/50V
R670' 1K
C679' 22P
C680' 0.022
D651' 1SS133
D650' 1SS133
R668' 10K
R669' 3.3K
R674 6.8K
R660' 4.7K
R635 4.7K
C660' 47/16V
C658 100P
C661' 10/16V
R659' 1K
NJM4558L 2/2
C659' 390P
R664 4.7K
Q650
Q650'
R673' 330K
R673 330K
C676 390P
C677 0.0068
Q605 DTC114ES
C626 47/10V
R638 22K
R639 10K
C632 0.1
D602 1SS133
C628 0.047
IC603 TA7291S
C629 10/16V
D605 3.9V
C627 10/16V
Q604 DTC114ES
R630 10 (1/4W)
R632 2.2K
R631 2.2K
CN607
VR LED
LD600 LT2P11G-B1
D604 1SS133
D603 1SS133
R665' 4.7K
R674' 6.8K
R664' 4.7K
C676' 390P
C677' 0.0068
VR655
VR655'
CN602'
CN603'
CN604 CN605
CN606
CN612
DSP VR
BAL VR
from FRONT 1~3 Lch ①~③ Rch
from FRONT DBBVR
from FRONT
DSPM0
DSPM1
AFMUTE
VRUP
VRDN
VRSW
VRLD
+5.6V
GND
GND
+17V
GND
10KHz
2.5KHz
1KHz
400Hz
160Hz

1602—495—0

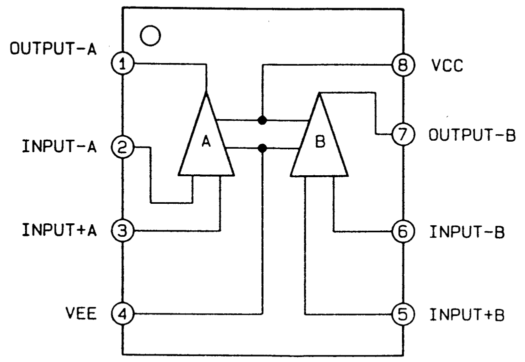
* Each Voltage is The VALVE when the Set is AUX mode.

SS OTHERWISE SPECIFIED

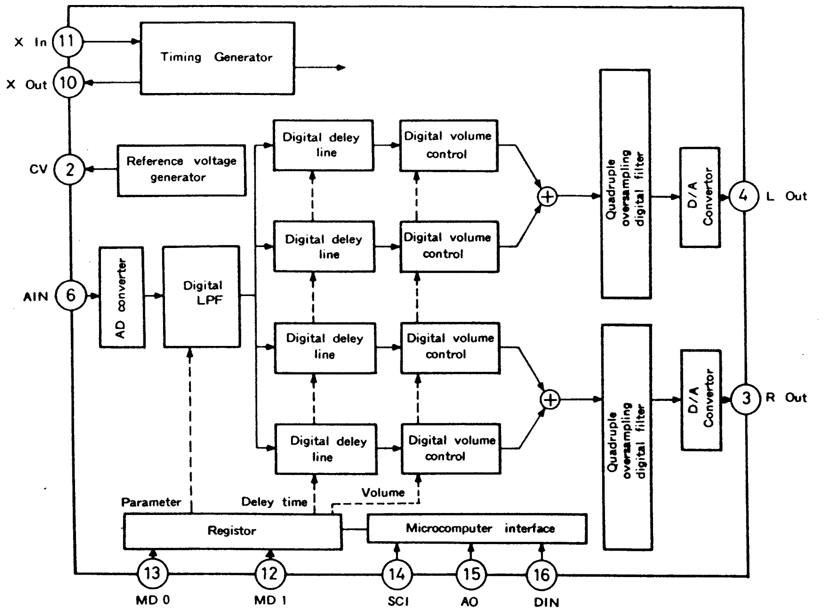
IC 101, IC 102, IC 604, IC 607, IC 700, IC 701: NJM 45578L


OUTPUT-A
INPUT-A
INPUT+A
VEE
VCC
OUTPUT-B
INPUT-B
INPUT+B
A
B
1
2
3
4
5
6
7
8

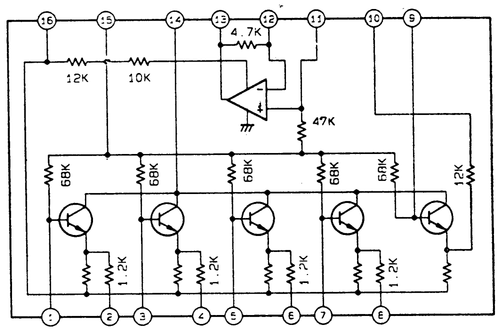
IC 307, IC 308, IC 606, IC 608: NJM4558D


OUTPUT-A
INPUT-A
INPUT+A
VEE
VCC
OUTPUT-B
INPUT-B
INPUT+B
A
B
1
2
3
4
5
6
7
8

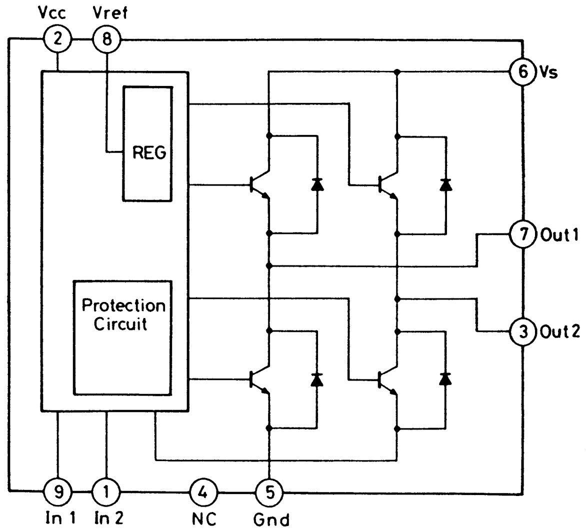
IC 601: YM3428


X In 11
X Out 10
CV 2
AIN 6
Timing Generator
Reference voltage generator
AD converter
Digital LPF
Digital deley line
Digital volume control
Quadruple oversampling digital filter
D/A Convertor
4 L Out
3 R Out
Parameter
Deley time
Volume
Registor
Microcomputer interface
13 MD 0
12 MD 1
14 SCI
15 AO
16 DIN

IC 602: LA3600

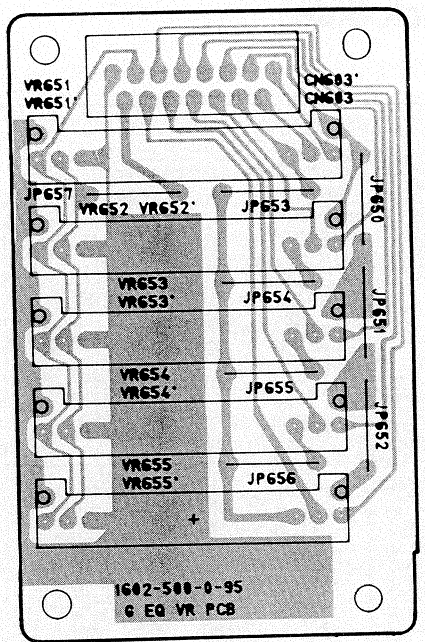

12K
10K
4.7K
47K
68K
12K
1.2K

IC 303, IC 603: TA7291S

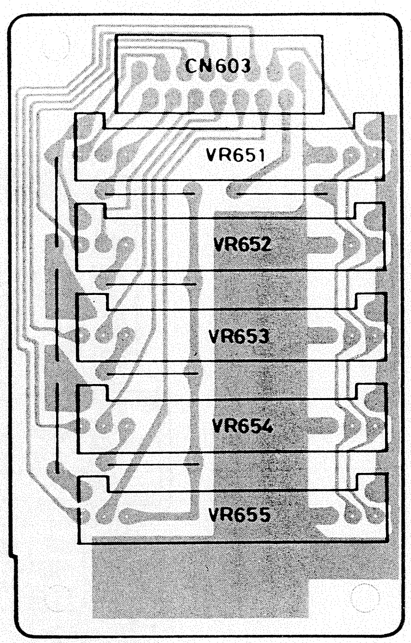

Vcc
Vref
2
8
6 Vs
REG
7 Out1
3 Out2
Protection Circuit
9 In 1
1 In 2
4 NC
5 Gnd

EQUALIZER PCB

Component Side

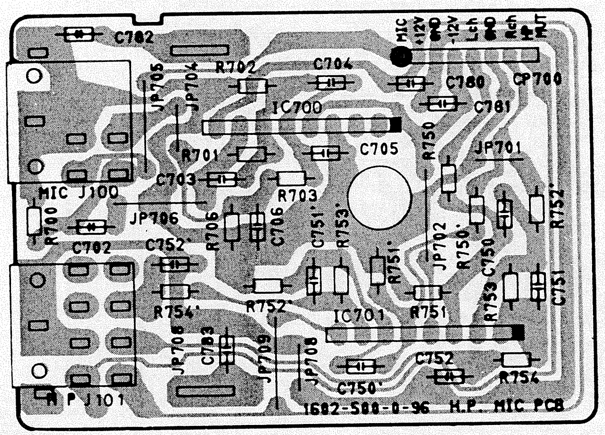

VR651
VR651'
CN603'
CN603
JP657
VR652 VR652'
JP653
JP650
VR653
VR653'
JP654
JP651
VR654
VR654'
JP655
JP652
VR655
VR655'
JP656
1602-500-0-95
G EQ VR PCB

Track Side

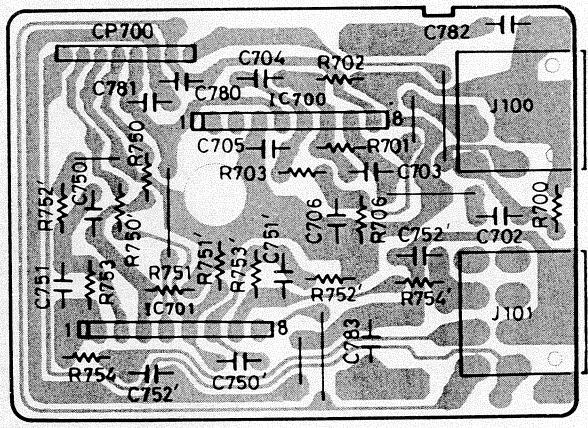

CN603
VR651
VR652
VR653
VR654
VR655

HEADPHONE PCB

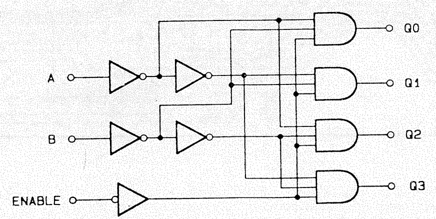
Component Side


C782
MIC
+12V
-12V
L
R
JP705
JP704
R702
C704
C780
CP700
C781
IC700
R701
C705
R750
JP701
C703
R703
MIC J100
R700
JP706
R706
C706
C751'
R753'
R751'
JP702
R750'
R752
C702
C752
R754'
R752'
IC701
R751
R753
C750
C751
JP708
C783
JP709
JP708
C750'
C752
R754
P J101
1602-500-0-96 H.P. MIC PCB

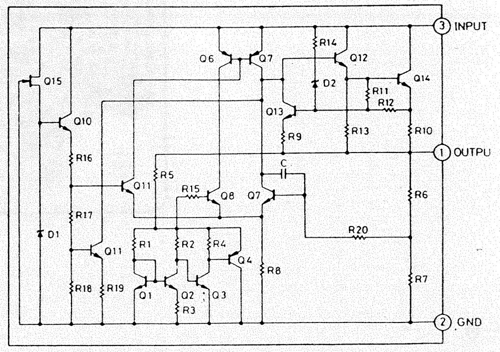
Track Side


CP700
C704
C782
R702
C781
C780
IC700
J100
C705
R701'
R750
R703
C703
R752'
C750
R750'
C706
R706
R700
C752'
C702
C751'
R753'
R751'
R753
C751
R752'
R754'
IC701
J101
R754'
C752'
C750'
C783

IC 600: UPD4555BC

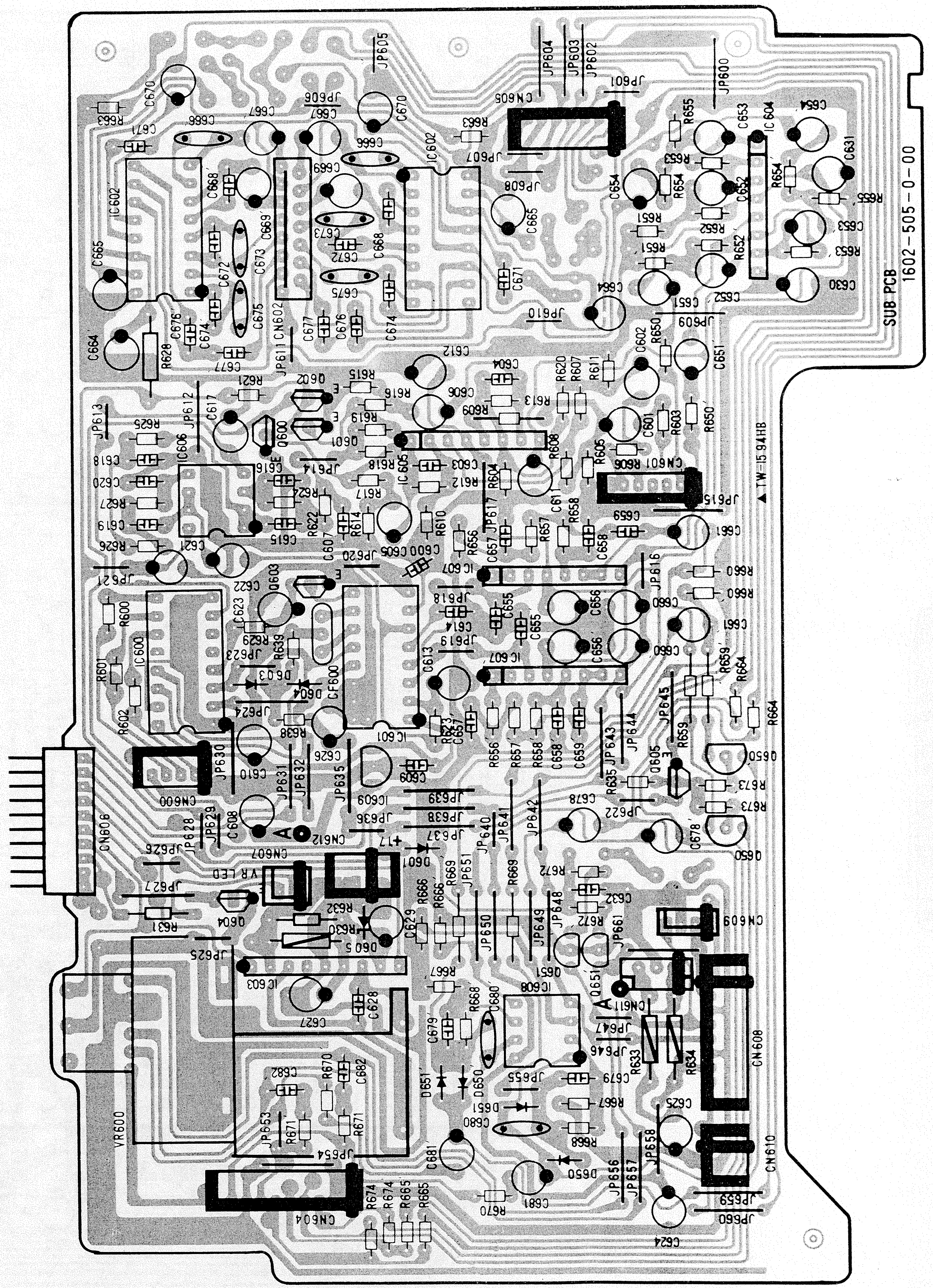

A
B
ENABLE
Q0
Q1
Q2
Q3

IC 609: NJM78L05A

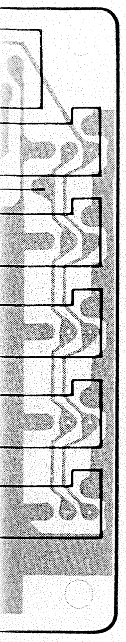

③ INPUT
① OUTPU
② GND
Q15
Q10
R16
R17
D1
Q11
R18
R19
Q1
Q2
Q3
R3
R1
R2
R4
Q4
R8
Q6
Q7
Q12
Q14
R14
D2
R11
R12
Q13
R9
R13
R10
R5
Q8
Q9
R15
R6
R20
R7

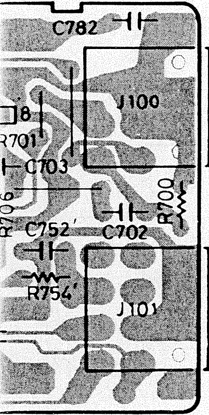
SUB PCB

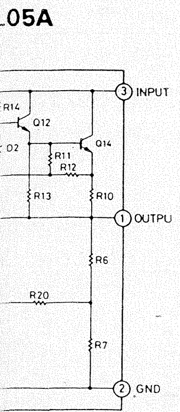
Component Side


JP605
JP604
JP603
JP602
JP601
JP600
CN605
JP606
C670
C671
R663
C666
C667
C669
C668
IC602
IC601
C673
C672
C675
C674
C665
C664
JP607
JP608
C654
R655
C653
IC604
C654
C631
R653
R654
C652
R652
R651
C651
C650
C630
JP609
JP610
1602-505-0-00
SUB PCB
C676
C677
C678
JP611
CN602
R628
R621
Q602
C612
C604
R620
R607
R611
R650
JP612
JP613
C617
R625
C618
C620
R627
C619
R626
IC606
Q600
Q601
R616
R619
R618
C616
C606
IC605
R613
R603
CN601
R606
R605
C601
R622
R617
R614
R610
C615
R612
R604
C607
C603
C600
C605
JP620
JP621
JP614
JP617
C657
R657
C658
C656
C655
C659
JP615
C661
C660
R660
TW=1.5 94HB
R600
R601
R602
C600
C622
C623
Q603
R629
JP623
JP624
R638
C613
IC607
JP618
JP619
C614
R659
R664
IC600
CN600
JP630
C610
JP631
JP632
JP635
C609
C626
R639
JP639
JP638
JP636
R656
R657
R658
JP643
JP644
JP645
R635
Q605
C678
JP622
R673
C650
CN606
JP629
JP628
C608
JP626
CN607
CN612
VR LED
JP637
JP640
JP641
JP642
C678
JP627
R631
Q604
R632
R630
C629
R666
R669
JP651
JP650
JP649
JP648
R672
C632
JP661
R661
CN609
JP625
C605
IC603
IC608
R688
Q680
Q651
CN611
JP647
JP646
R633
R634
CN608
C627
C628
C679
C682
R670
C681
D651
D650
Q681
JP655
C679
R667
C625
VR600
JP653
R671
JP654
C680
R668
Q650
JP658
JP656
JP657
CN610
CN604
R674
R673
R665
R670
C683
JP659
JP660
C624

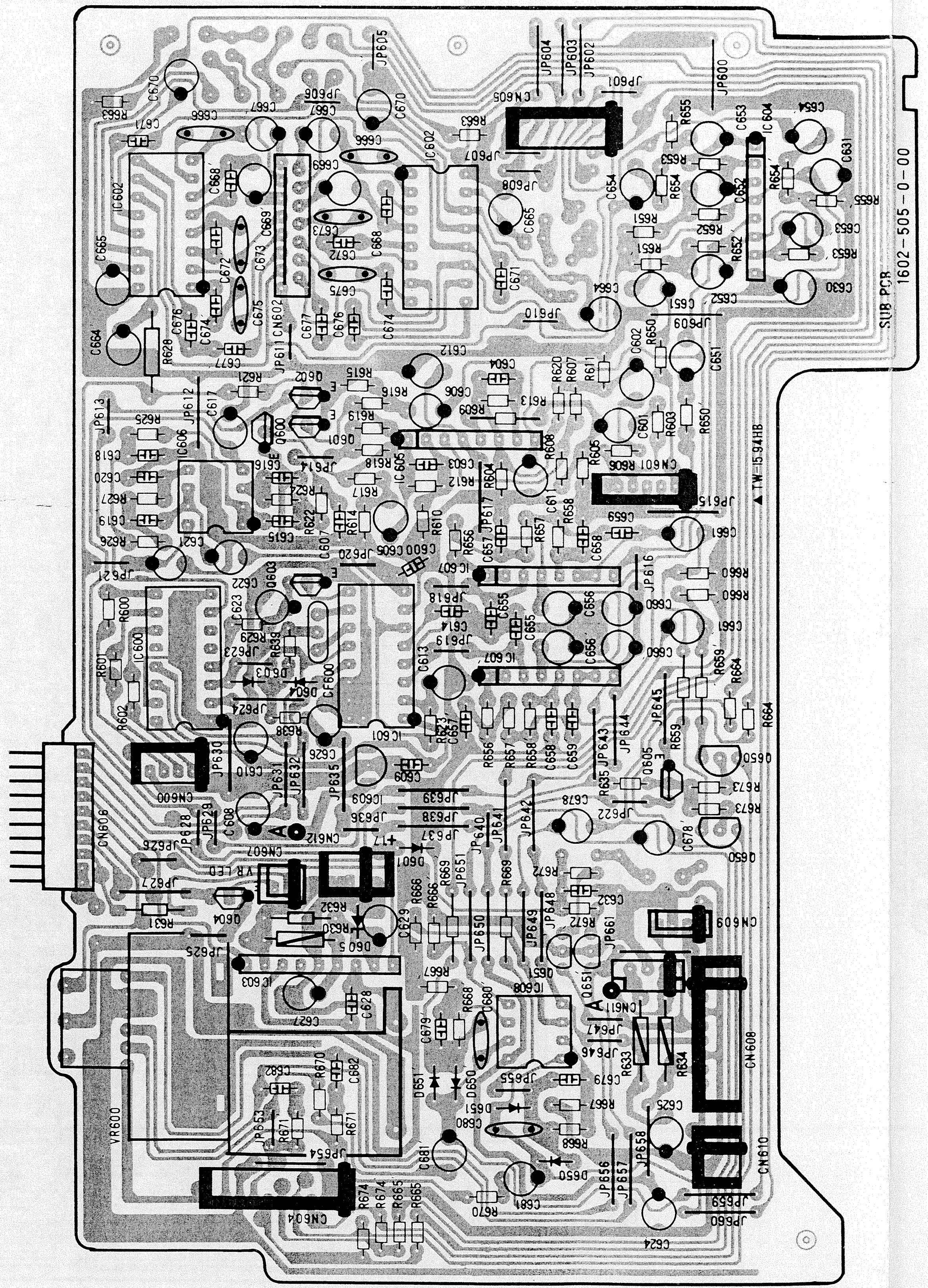
SUB PCB





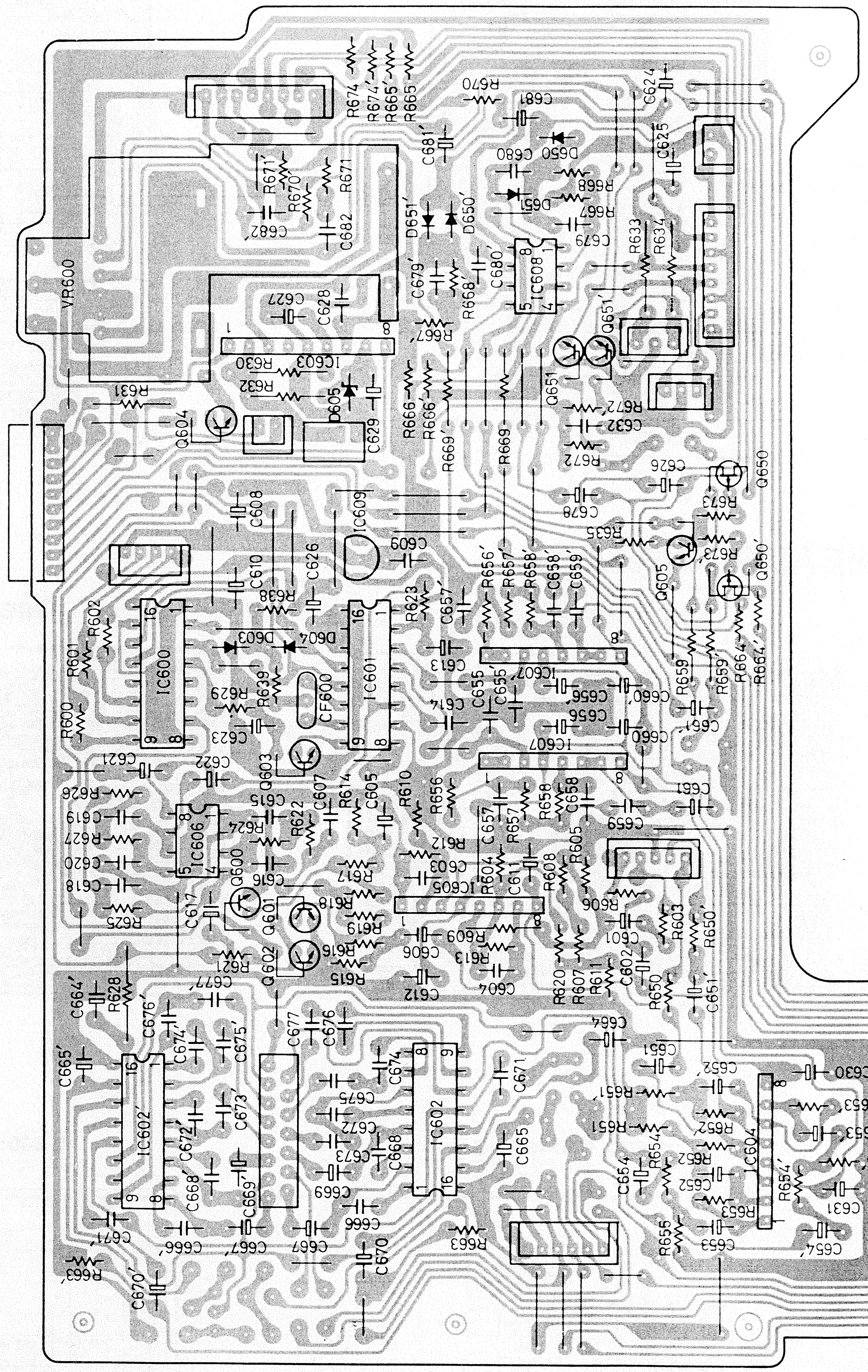

.05A
INPUT
OUTPU
GND

Component Side

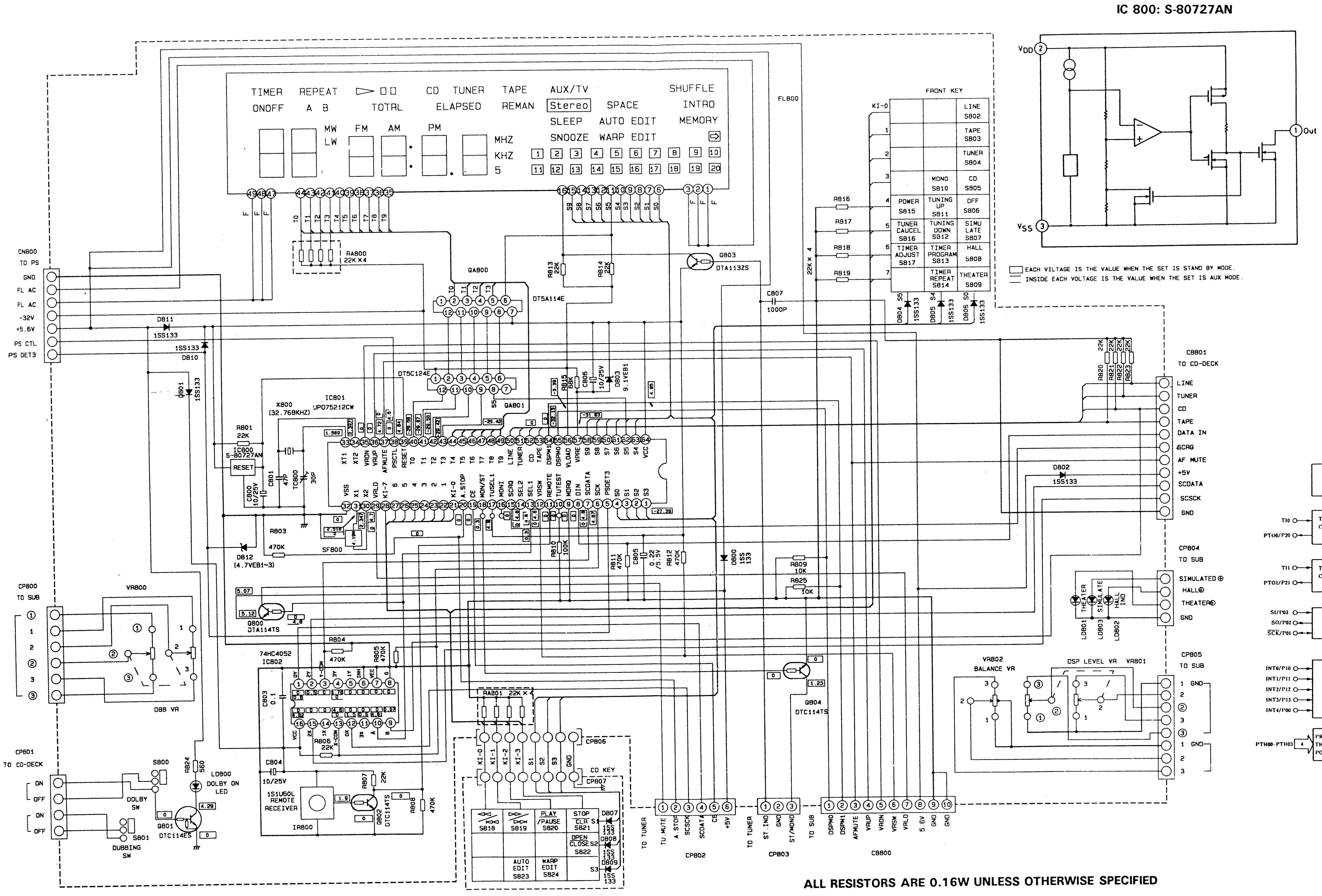

SUB PCB
1602-505-0-00
▲TW-15.94HB
VR600
CN604
CN606
CN608
CN610
IC600
IC601
IC602
IC603
IC604
IC605
IC606
IC607
IC608
CF600
VR LED

1602—505—0

Track Side


VR600
IC600
IC601
IC602
IC603
IC604
IC605
IC606
IC607
IC608
IC609
CF600

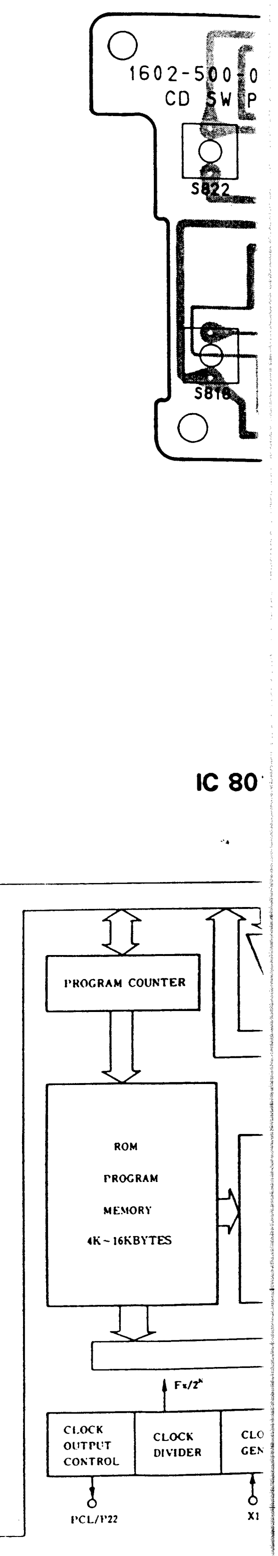
SCHEMATIC DIAGRAM SYSTEM FOR UL


IC 800: S-80727AN
VDD ②
VSS ③
① Out
FL800
TIMER REPEAT CD TUNER TAPE AUX/TV SHUFFLE
ONOFF A B TOTAL ELAPSED REMAN Stereo SPACE INTRO
SLEEP AUTO EDIT MEMORY
SNOOZE WARP EDIT
MW LW FM AM PM MHZ KHZ
FRONT KEY
LINE S802
TAPE S803
TUNER S804
MONO S810
CD S905
POWER S815
TUNING UP S811
OFF S806
TUNER CAUCEL S816
TUNING DOWN S812
SIMU LATE S807
TIMER ADJUST S817
TIMER PROGRAM S813
HALL S808
TIMER REPEAT S814
THEATER S809
KI-0
R816
R817
R818
R819
22K × 4
D804 1SS133
D805 1SS133
D806 1SS133
C807 1000P
Q803 DTA113ZS
R813 22K
R814 22K
RA800 22K × 4
QA800
DT5A114E
CN800 TO PS
GND
FL AC
FL AC
-32V
+5.6V
PS CTL
PS DET3
D811 1SS133
1SS133
D810
D801 1SS133
X800 (32.768KHZ)
IC801 UPD75212CW
R801 22K
IC800 S-80727AN
RESET
C800 10/25V
C801 47P
TC800 30P
DT5C124E
QA801
R815 68K
C806 10/25V
D803 9.1VEB1
R803 470K
D812 (4.7VEB1~3)
SF800
R810 100K
R811 470K
C805 0.22 /5.5V
R812 470K
D800 1SS133
R809 10K
R825 10K
D802 1SS133
CB801 TO CD-DECK
LINE
TUNER
CD
TAPE
DATA IN
SCRQ
AF MUTE
+5V
SCDATA
SCSCK
GND
R820 R821 R822 R823 22K
CP804 TO SUB
SIMULATED ⊕
HALL ⊕
THEATER ⊕
GND
LD801 THEATER
LD803 SIMULATE
LD802 HALL IND
CP805 TO SUB
VR802 BALANCE VR
DSP LEVEL VR VR801
CP800 TO SUB
VR800
DBB VR
Q800 DTA114TS
74HC4052 IC802
R804 470K
R805 470K
C803 0.1
R806 22K
C804 10/25V
1S1U60L REMOTE RECEIVER
IR800
R807 22K
Q802 DTC114TS
R808 470K
RA801 22K × 4
CP806
KI-0 KI-1 KI-2 KI-3 S1 S2 S3 GND
CD KEY CP807
S818 S819 PLAY /PAUSE S820 STOP CLR S821
OPEN CLOSE S2 S822
AUTO EDIT S823
WARP EDIT S824
D807 1SS133
D808 1SS133
D809 1SS133
Q804 DTC114TS
CP801 TO CD-DECK
S800
ON OFF
DOLBY SW
R824 560
LD800 DOLBY ON LED
Q801 DTC114ES
S801 DUBBING SW
TO TUNER TU_MUTE A.STOP SCSCK SCDATA CE +5V
CP802
TO TUNER ST.IND GND ST/MONO
CP803
TO SUB DSPM0 DSPM1 AFMUTE VRUP VRDN VRSW VRLD 5.6V GND GND
CB800

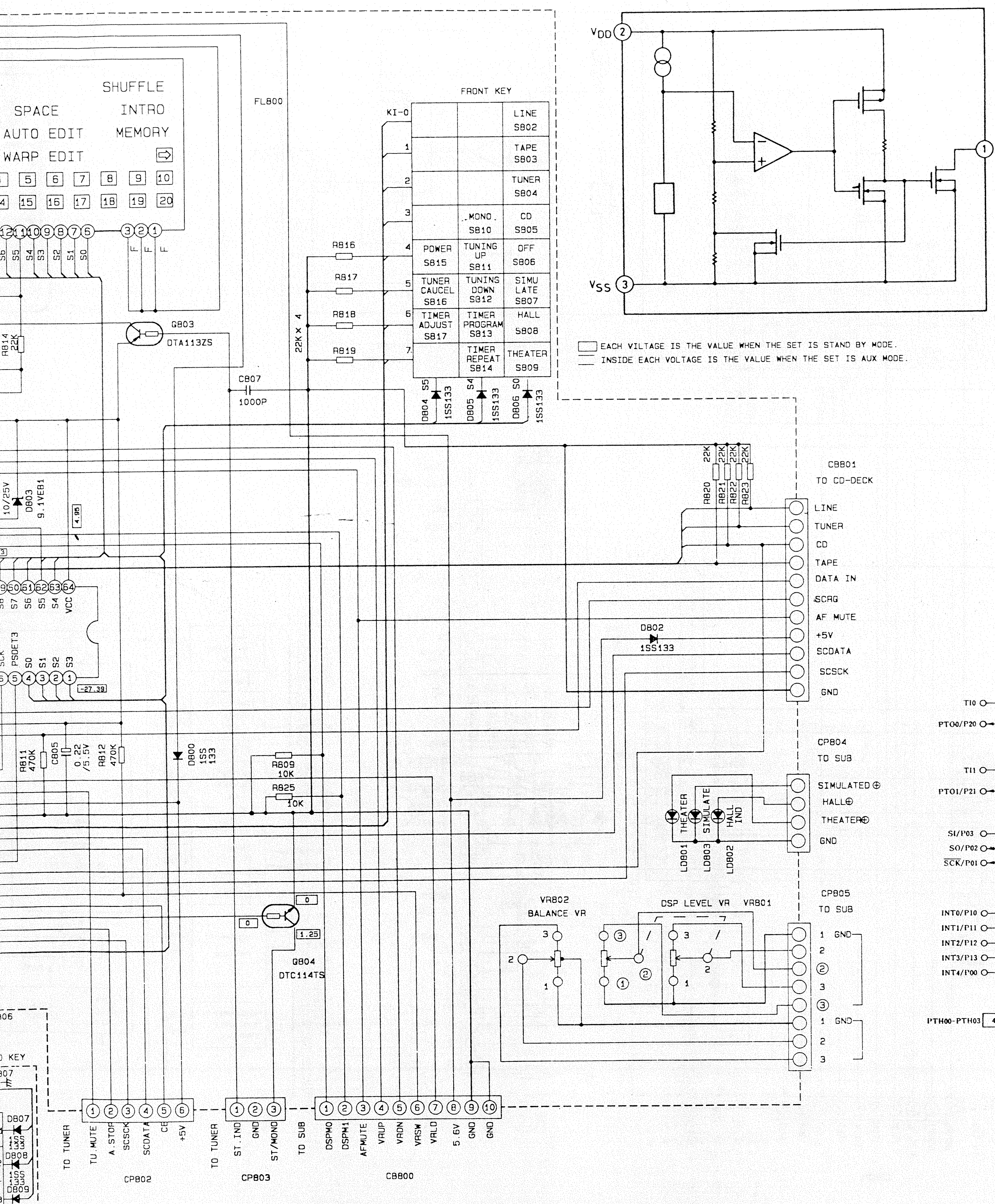
□ EACH VOLTAGE IS THE VALUE WHEN THE SET IS STAND BY MODE.
— INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS AUX MODE.

ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

SWITCH


1602-500
CD SW P
S822
S818
IC 80
BASIC INTERVAL TIMER
INTBT
TIMER/EVENT COUNTER #0
INTT0
TIMER/EVENT COUNTER #1
INTT1
SERIAL INTERFACE
INTSIO
INTERRUPT CONTROL
PROGRAMMABLE THRESHOLD PORT #0
PROGRAM COUNTER
ROM PROGRAM MEMORY 4K~16KBYTES
CLOCK OUTPUT CONTROL
CLOCK DIVIDER
Fx/2ⁿ
TI0
PTO0/P20
TI1
PTO1/P21
SI/P03
SO/P02
SCK/P01
INT0/P10
INT1/P11
INT2/P12
INT3/P13
INT4/P00
PTH00-PTH03
PCL/P22
X1

IC 800: S-80727AN


VDD 2
VSS 3
1 Out
FL800
SHUFFLE
SPACE
INTRO
AUTO EDIT
MEMORY
WARP EDIT
FRONT KEY
KI-0
LINE S802
TAPE S803
TUNER S804
MONO S810
CD S805
POWER S815
TUNING UP S811
OFF S806
TUNER CAUCEL S816
TUNING DOWN S812
SIMU LATE S807
TIMER ADJUST S817
TIMER PROGRAM S813
HALL S808
TIMER REPEAT S814
THEATER S809
R816
R817
R818
R819
22K × 4
Q803
DTA113ZS
C807
1000P
D804 1SS133
D805 1SS133
D806 1SS133
R820 R821 R822 R823
22K
CB801
TO CD-DECK
LINE
TUNER
CD
TAPE
DATA IN
SCRG
AF MUTE
+5V
SCDATA
SCSCK
GND
D802
1SS133
D800 1SS 133
R809 10K
R825 10K
R811 470K
C805 0.22 /5.5V
R812 470K
D803 9.1VEB1
10/25V
CP804
TO SUB
SIMULATED
HALL
THEATER
GND
LD801 THEATER
LD803 SIMULATE
LD802 HALL IND
CP805
TO SUB
VR802
BALANCE VR
DSP LEVEL VR
VR801
Q804
DTC114TS
KEY
D807
D808
D809
1SS 133
TO TUNER
TU MUTE
A.STOP
SCSCK
SCDATA
+5V
CP802
TO TUNER
ST.IND
GND
ST/MONO
CP803
TO SUB
DSPM0
DSPM1
AFMUTE
VRUP
VRDN
VRSW
VRLD
5.6V
GND
GND
CB800

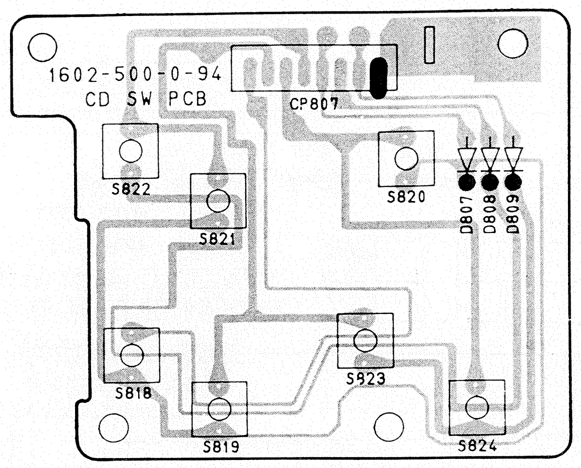
EACH VILTAGE IS THE VALUE WHEN THE SET IS STAND BY MODE.

INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS AUX MODE.

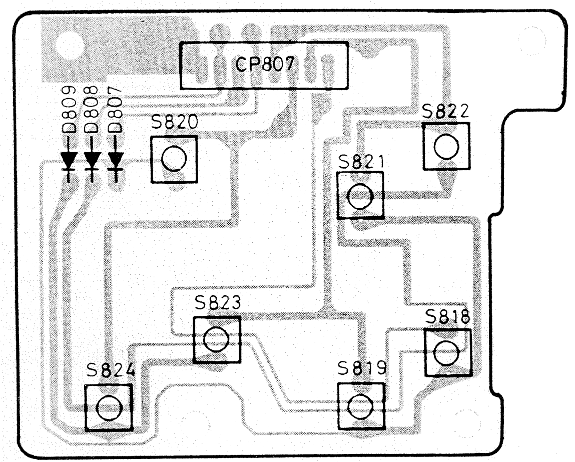
ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

SWITCH PCB

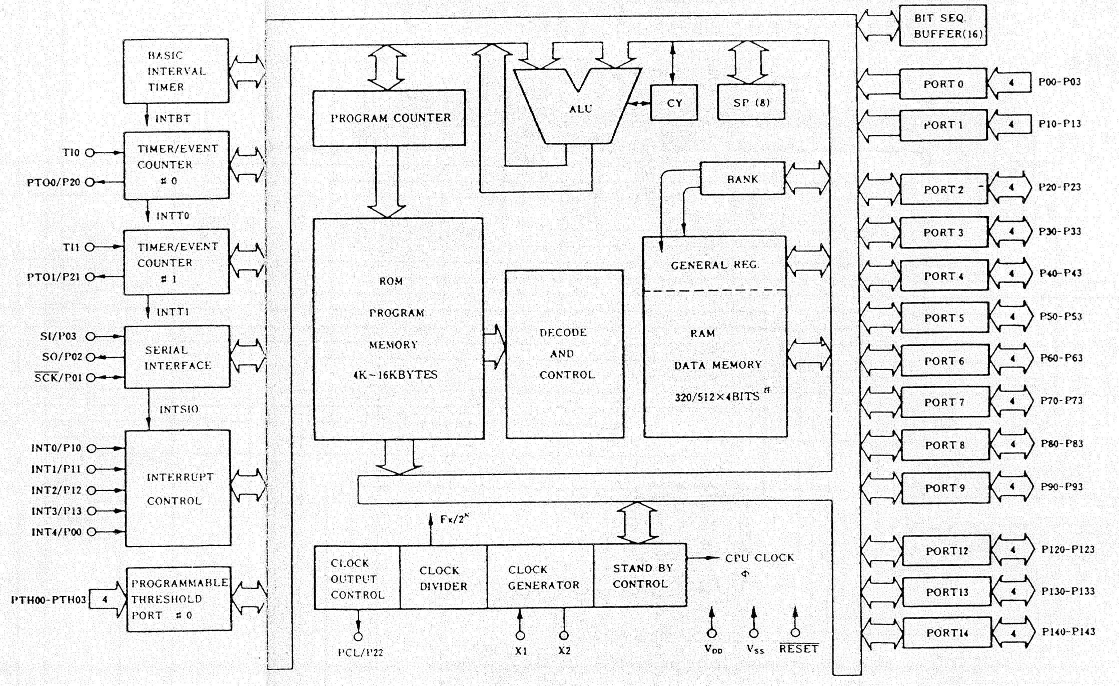
Component Side


1602-500-0-94
CD SW PCB
CP807
S822
S821
S820
D807
D808
D809
S818
S823
S819
S824

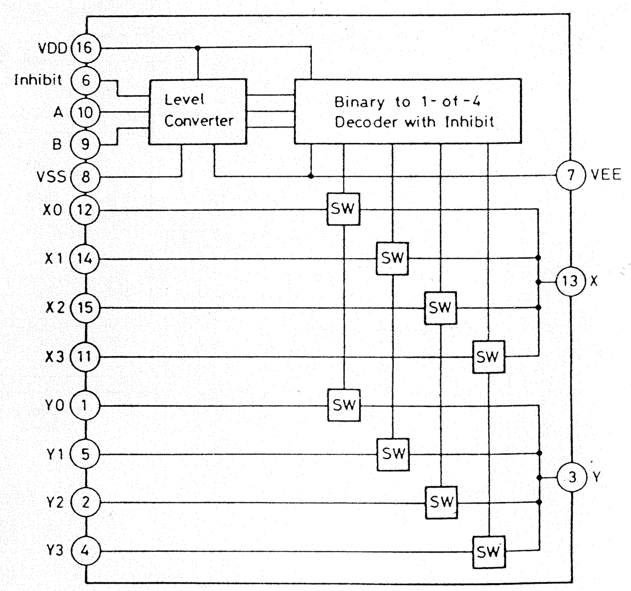
Track Side


CP807
D809
D808
D807
S820
S822
S821
S823
S818
S824
S819

IC 801: UPD75212ACW-A01

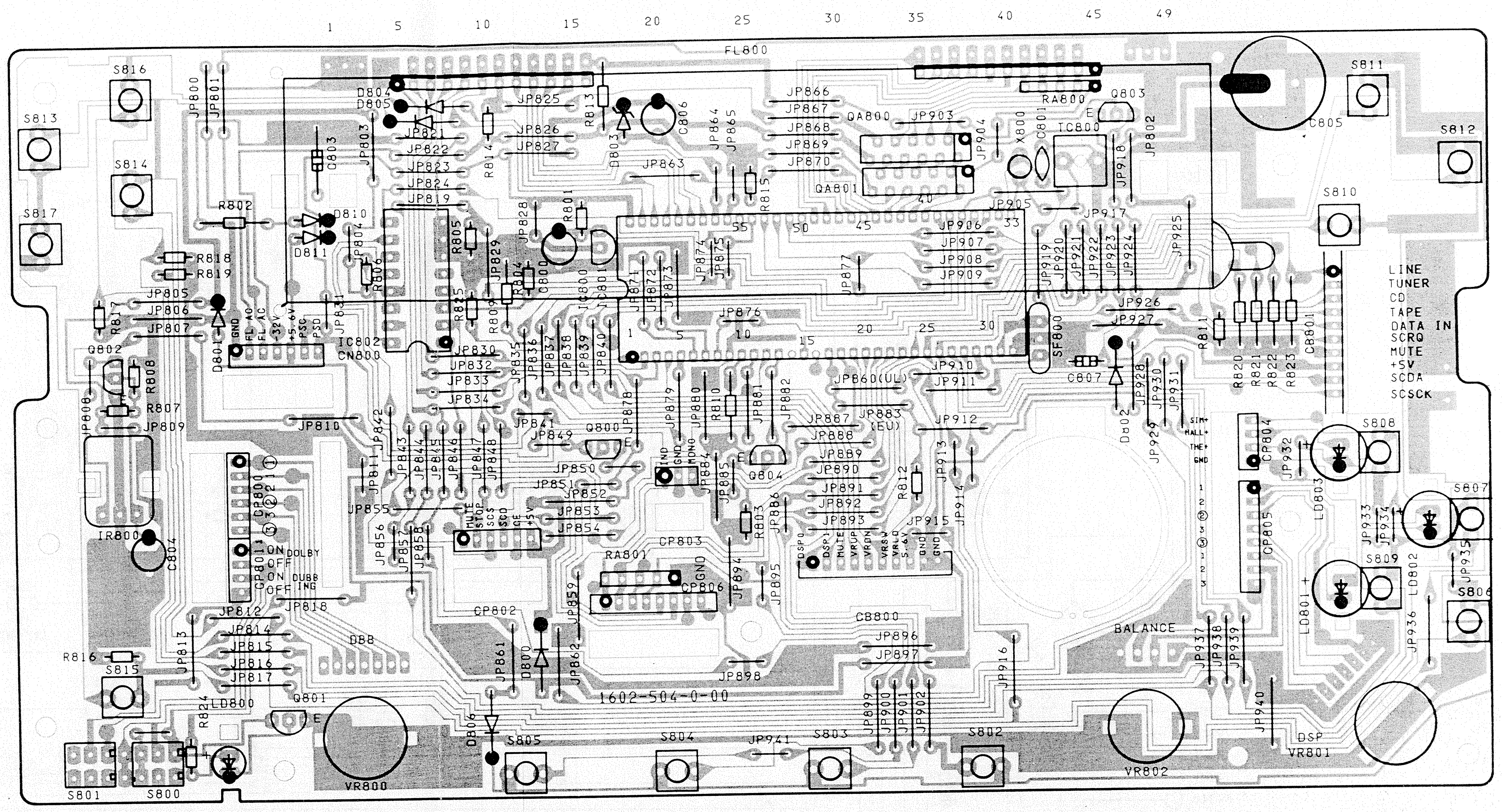

BASIC INTERVAL TIMER
INTBT
TI0
PTO0/P20
TIMER/EVENT COUNTER #0
INTT0
TI1
PTO1/P21
TIMER/EVENT COUNTER #1
INTT1
SI/P03
SO/P02
SCK/P01
SERIAL INTERFACE
INTSIO
INT0/P10
INT1/P11
INT2/P12
INT3/P13
INT4/P00
INTERRUPT CONTROL
PTH00-PTH03
PROGRAMMABLE THRESHOLD PORT #0
PROGRAM COUNTER
ALU
CY
SP (8)
BANK
GENERAL REG.
ROM PROGRAM MEMORY 4K~16KBYTES
DECODE AND CONTROL
RAM DATA MEMORY 320/512×4BITS
Fx/2ⁿ
CLOCK OUTPUT CONTROL
CLOCK DIVIDER
CLOCK GENERATOR
STAND BY CONTROL
CPU CLOCK Φ
PCL/P22
X1
X2
VDD
VSS
RESET
BIT SEQ. BUFFER(16)
PORT 0 P00-P03
PORT 1 P10-P13
PORT 2 P20-P23
PORT 3 P30-P33
PORT 4 P40-P43
PORT 5 P50-P53
PORT 6 P60-P63
PORT 7 P70-P73
PORT 8 P80-P83
PORT 9 P90-P93
PORT12 P120-P123
PORT13 P130-P133
PORT14 P140-P143

IC 802: UPD74HC4052C


VDD 16
Inhibit 6
A 10
B 9
VSS 8
X0 12
X1 14
X2 15
X3 11
Y0 1
Y1 5
Y2 2
Y3 4
Level Converter
Binary to 1-of-4 Decoder with Inhibit
SW
7 VEE
13 X
3 Y

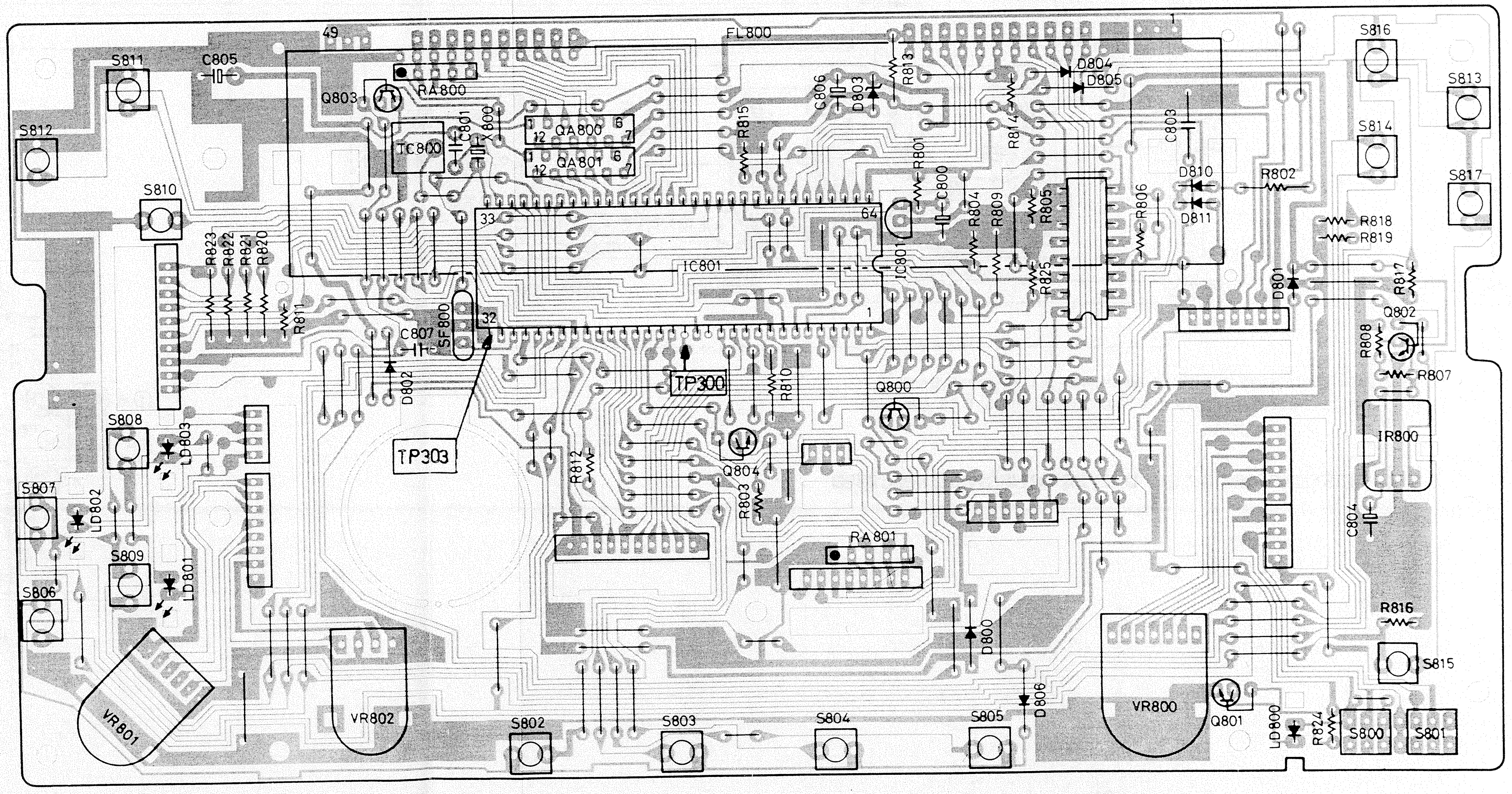
DIAPLAY PCB

Component Side



1
5
10
15
20
25
30
35
40
45
49
FL800
S816
S813
S814
S817
S811
S812
S810
S808
S807
S809
S806
S815
S805
S804
S803
S802
S801
S800
IC800
IC802
CN800
TC800
QA800
QA801
RA800
RA801
Q800
Q801
Q802
Q803
Q804
X800
SF800
IR800
LD800
LD801
LD802
LD803
CP802
CP803
CP804
CP805
CP806
CB800
VR800
VR801
VR802
BALANCE
DSP
LINE
TUNER
CD
TAPE
DATA IN
SCRO
MUTE
+5V
SCDA
SCSCK
DOLBY
DUBBING
1602-504-0-00

Track Side



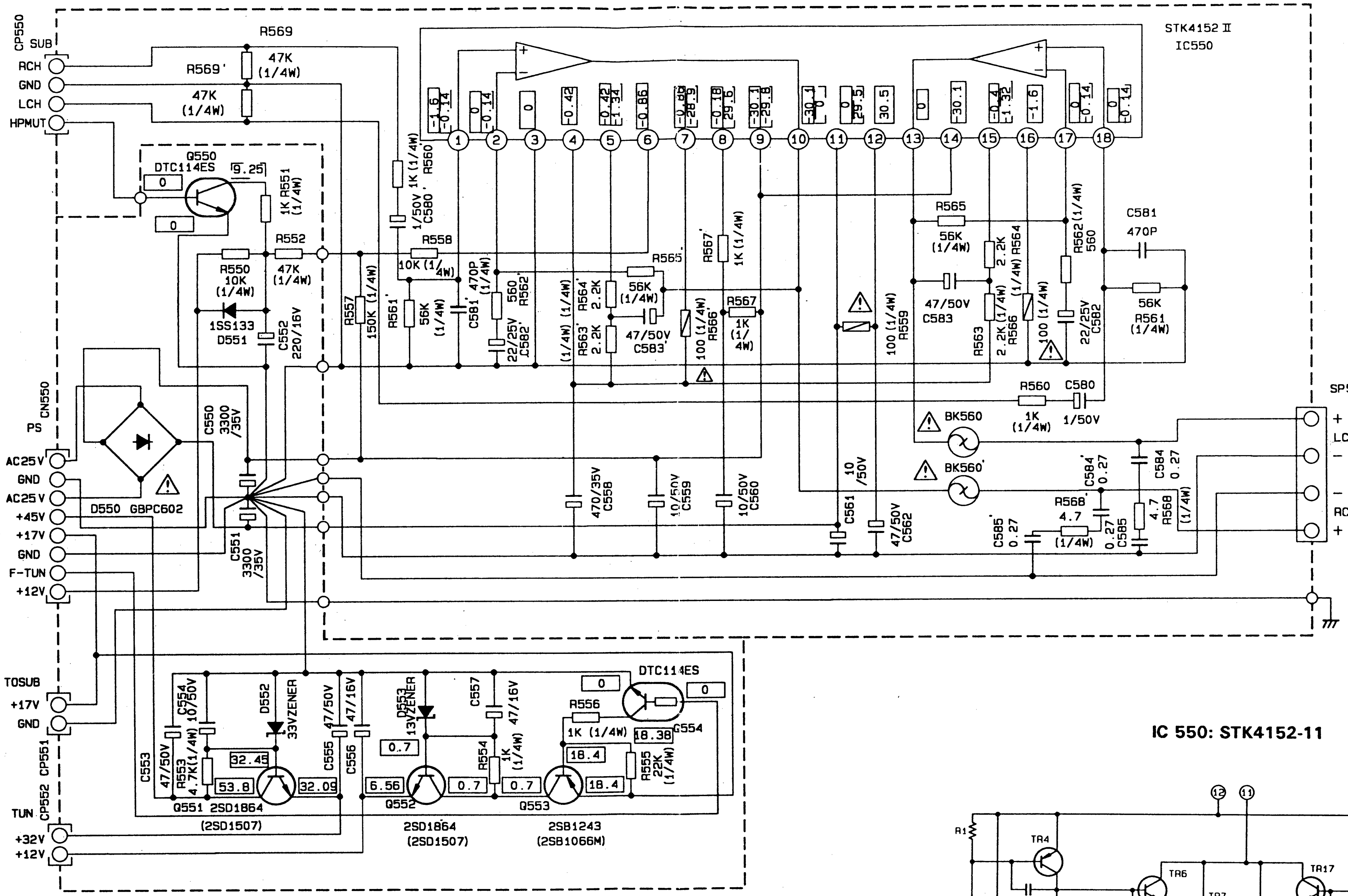
49
FL800
S811
S812
S810
S808
S807
S809
S806
S816
S813
S814
S817
S815
S802
S803
S804
S805
S800
S801
C805
RA800
RA801
Q803
Q802
Q800
Q801
Q804
TC800
QA800
QA801
IC801
SF800
C807
D802
TP300
TP303
IR800
LD800
LD801
LD802
LD803
VR800
VR801
VR802
R802
R816
R824

1602−504−0

	ADJUST WITH	READ ON	ADJUST TO
Clock Alignment	TC800	Frequency counter *	2048±0.5Hz

* Across TP300 & TP303 (GND)

SCHEMATIC DIAGRAM, MAIN AMPLIFIER

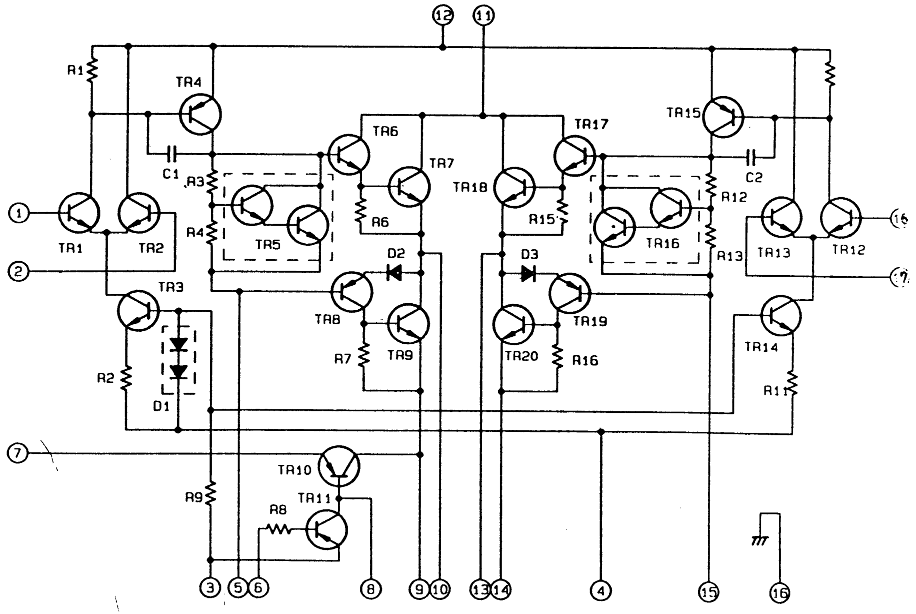

CP550
SUB
RCH
GND
LCH
HPMUT
R569
R569'
47K (1/4W)
Q550 DTC114ES
9.25
R551 1K (1/4W)
R552 47K (1/4W)
R550 10K (1/4W)
1SS133 D551
C552 220/16V
R557 150K (1/4W)
R561' 56K (1/4W)
R558 10K (1/4W)
C581' 470P
R562' 560 (1/4W)
C582' 22/25V
R563' 2.2K (1/4W)
R564' 2.2K (1/4W)
R565' 56K (1/4W)
C583' 47/50V
R566' 100 (1/4W)
R567' 1K (1/4W)
R567 1K (1/4W)
R559 100 (1/4W)
R560' 1K (1/4W)
C580' 1/50V
STK4152 II
IC550
R565 56K (1/4W)
R564 2.2K (1/4W)
R563 2.2K (1/4W)
R566 100 (1/4W)
R562 560 (1/4W)
C582 22/25V
C583 47/50V
C581 470P
R561 56K (1/4W)
R560 1K (1/4W)
C580 1/50V
BK560
BK560'
SP550
LCH
RCH
C584' 0.27
C584 0.27
R568' 4.7 (1/4W)
R568 4.7 (1/4W)
C585' 0.27
C585 0.27
C561 10/50V
C562 47/50V
C558 470/35V
C559 10/50V
C560 10/50V
CN550
PS
AC25V
GND
AC25V
+45V
+17V
GND
F-TUN
+12V
D550 GBPC602
C550 3300/35V
C551 3300/35V
TOSUB
+17V
GND
CP551
TUN
CP552
+32V
+12V
C553 47/50V
C554 10/50V
R553 4.7K(1/4W)
D552 33VZENER
32.45
53.8
32.09
Q551 2SD1864 (2SD1507)
C555 47/50V
C556 47/16V
D553 13VZENER
0.7
6.56
Q552 2SD1864 (2SD1507)
C557 47/16V
R554 1K (1/4W)
R556 1K (1/4W)
18.38
18.4
R555 22K (1/4W)
Q553 2SB1243 (2SB1066M)
DTC114ES
G554

☐ EACH VOLTAGE IS THE VALUE WHEN THE SET IS STAND BY MODE.

⌐ INSIDE EACH VOLTAGE IS THE VALUE WHEN THE SET IS AUX MODE.

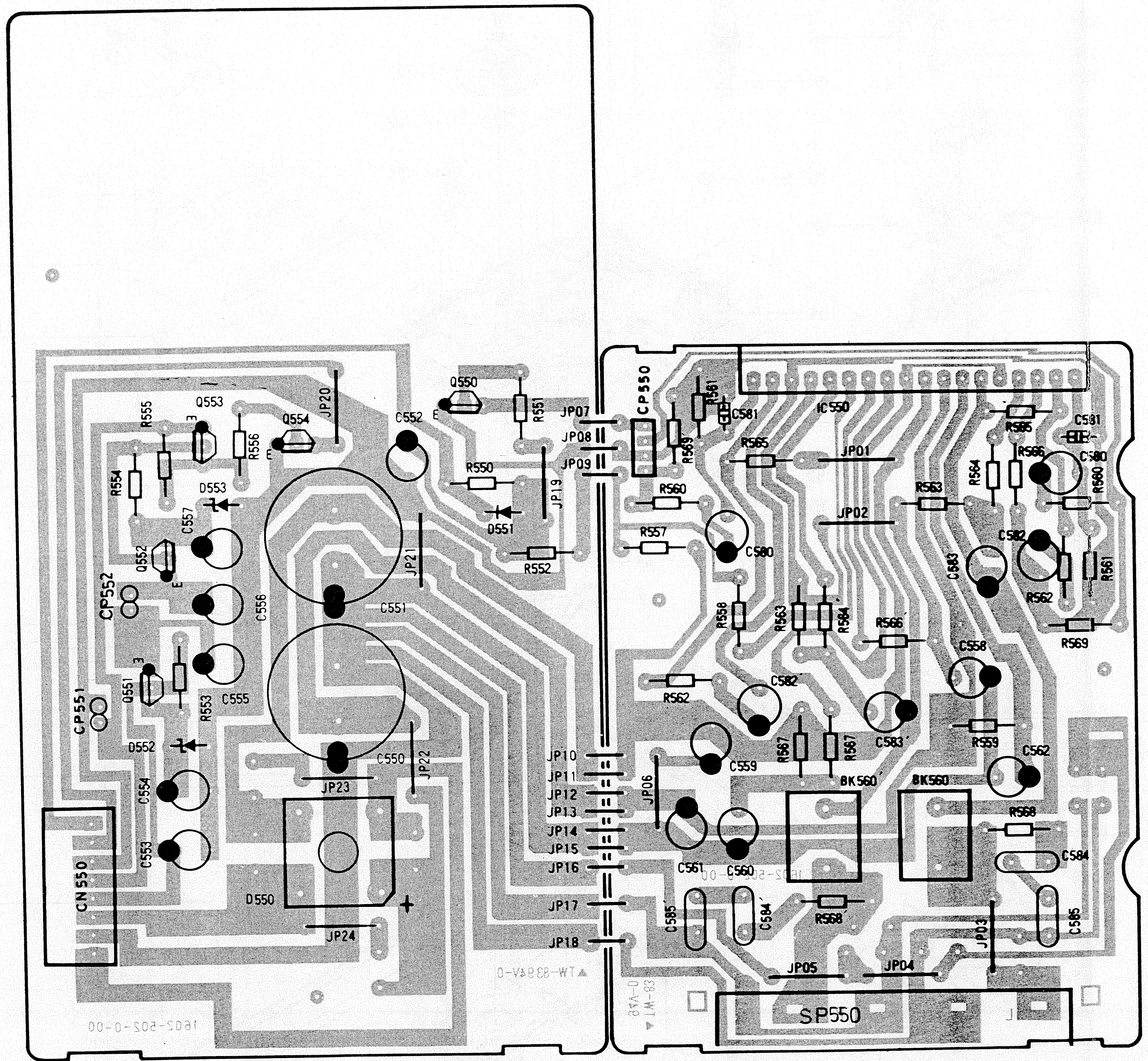
ALL RESISTORS ARE 0.16W UNLESS OTHERWISE SPECIFIED

IC 550: STK4152-11

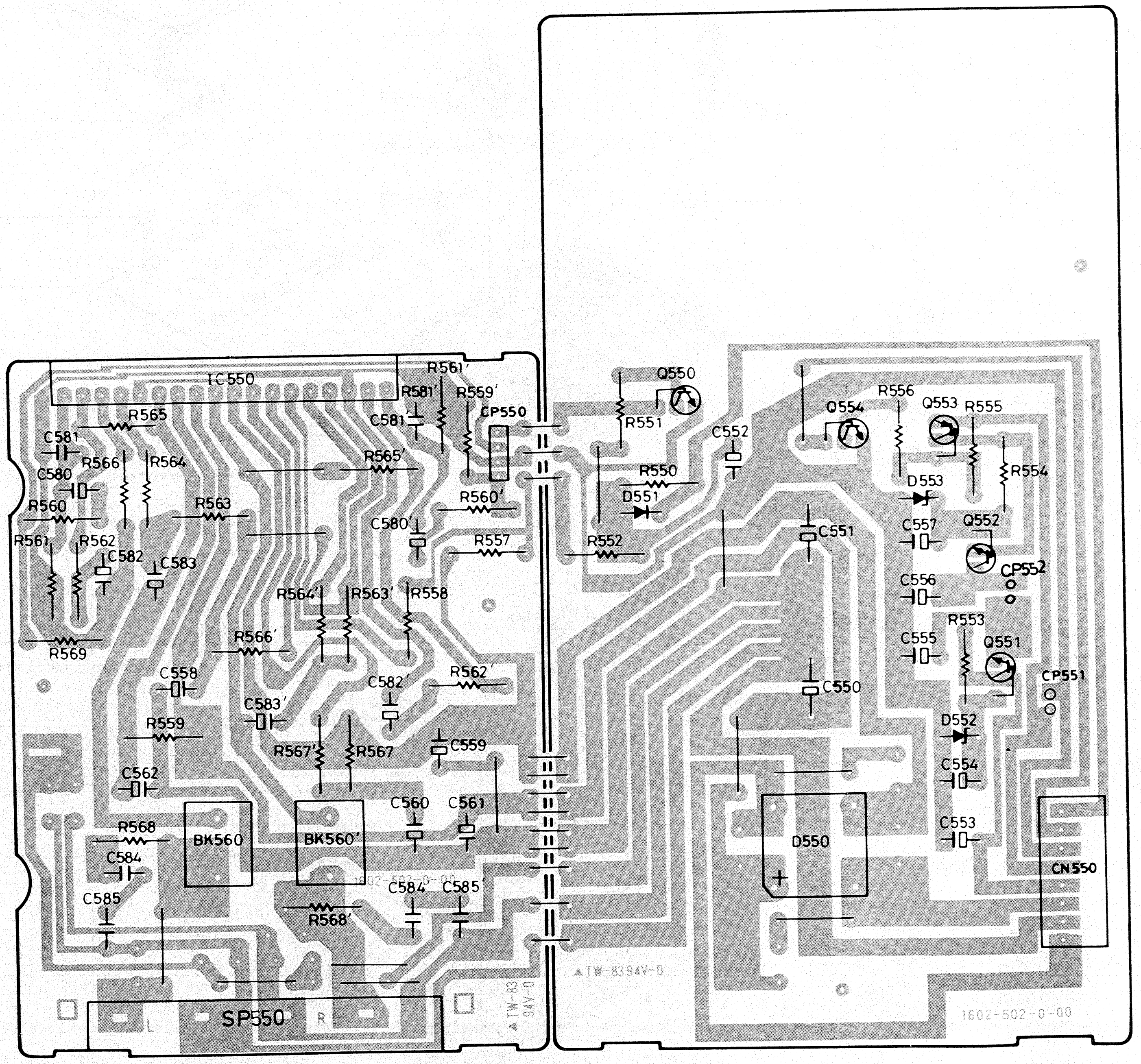

TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
TR9
TR10
TR11
TR12
TR13
TR14
TR15
TR16
TR17
TR18
TR19
TR20
R1
R2
R3
R4
R6
R7
R8
R9
R11
R12
R13
R15
R16
C1
C2
D1
D2
D3

MAIN AMPLIFIER PCB

Component Side

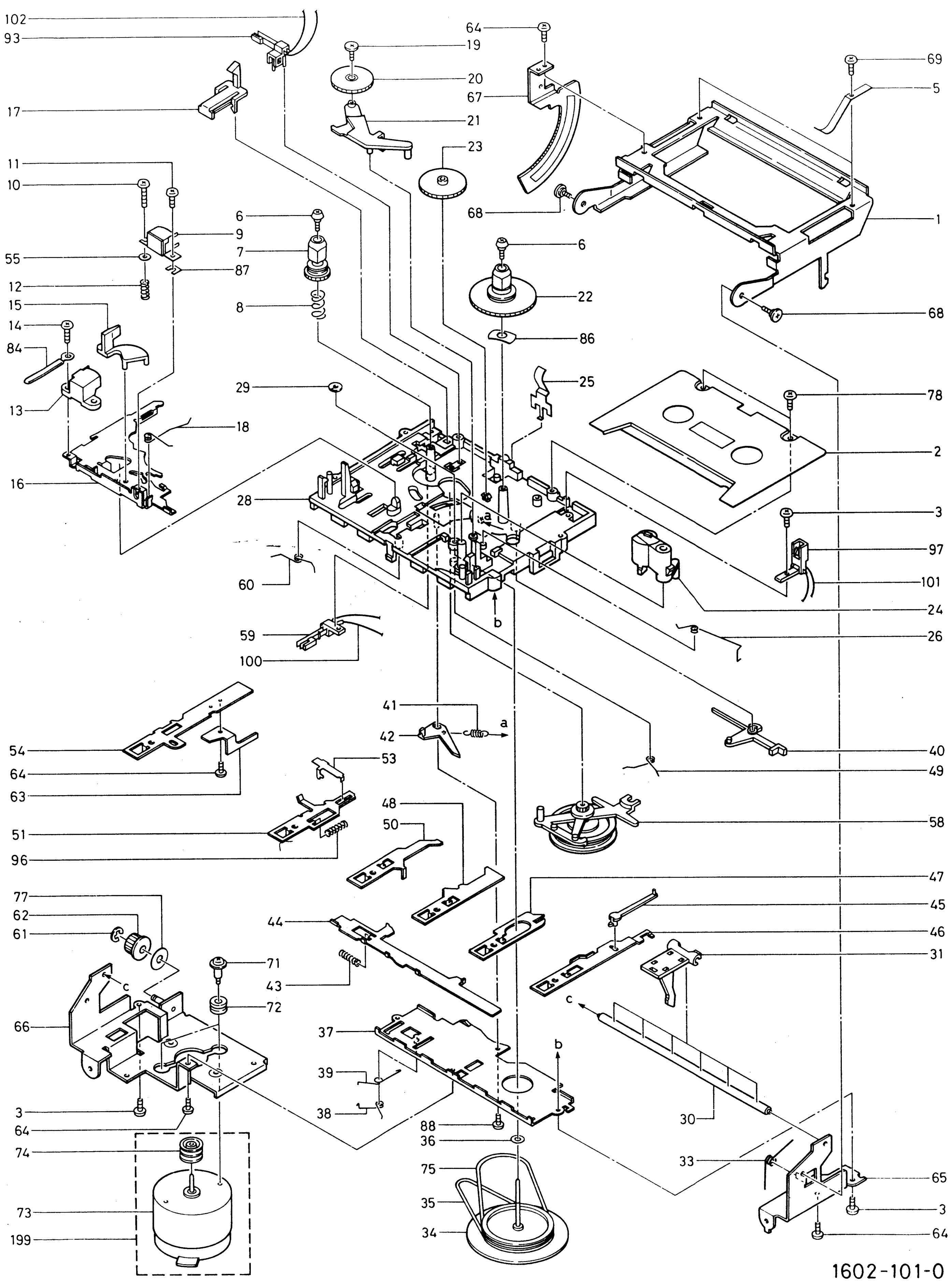

Q550
R551
JP07
JP08
JP09
CP550
R561
C581
IC550
C581
R565
R585
R566
C580
R560
R550
R553
Q553
Q554
R555
R556
R554
D553
C557
D551
R552
JP19
JP20
C552
JP01
JP02
R557
R563
R564
C582
R562
C583
R561
Q552
CP552
C556
C551
JP21
R558
R563
R564'
R566
R569
C558
CP551
Q551
R553
C555
D552
C554
C553
C550
JP22
JP23
R562
C582'
C583'
R567
R567
R559
C562
JP10
JP11
JP12
JP13
JP14
JP15
JP16
JP17
JP18
JP06
C559
BK560
BK560
R568
C584
C561
C560
C585
C584'
R568
C585
JP03
JP05
JP04
CN550
D550
JP24
SP550
1602-502-0-00
TW-8394V-0

Track Side


IC550
R561'
R581'
R559'
CP550
C581
R565
C581'
R566
R564
R565'
C580
R560'
R560
R563
C580'
R557
R561
R562
C582
C583
R564'
R563'
R558
R569
R566'
C558
C582'
R562'
C583'
R559
R567'
R567
C559
C562
R568
BK560
BK560'
C560
C561
C584
C585
C584'
C585'
R568'
SP550
L
R
Q550
R551
C552
R550
D551
R552
Q554
R556
Q553
R555
D553
R554
C557
Q552
C551
C556
CP552
R553
C555
Q551
C550
CP551
D552
C554
C553
D550
CN550
TW-8394V-0
1602-502-0-00

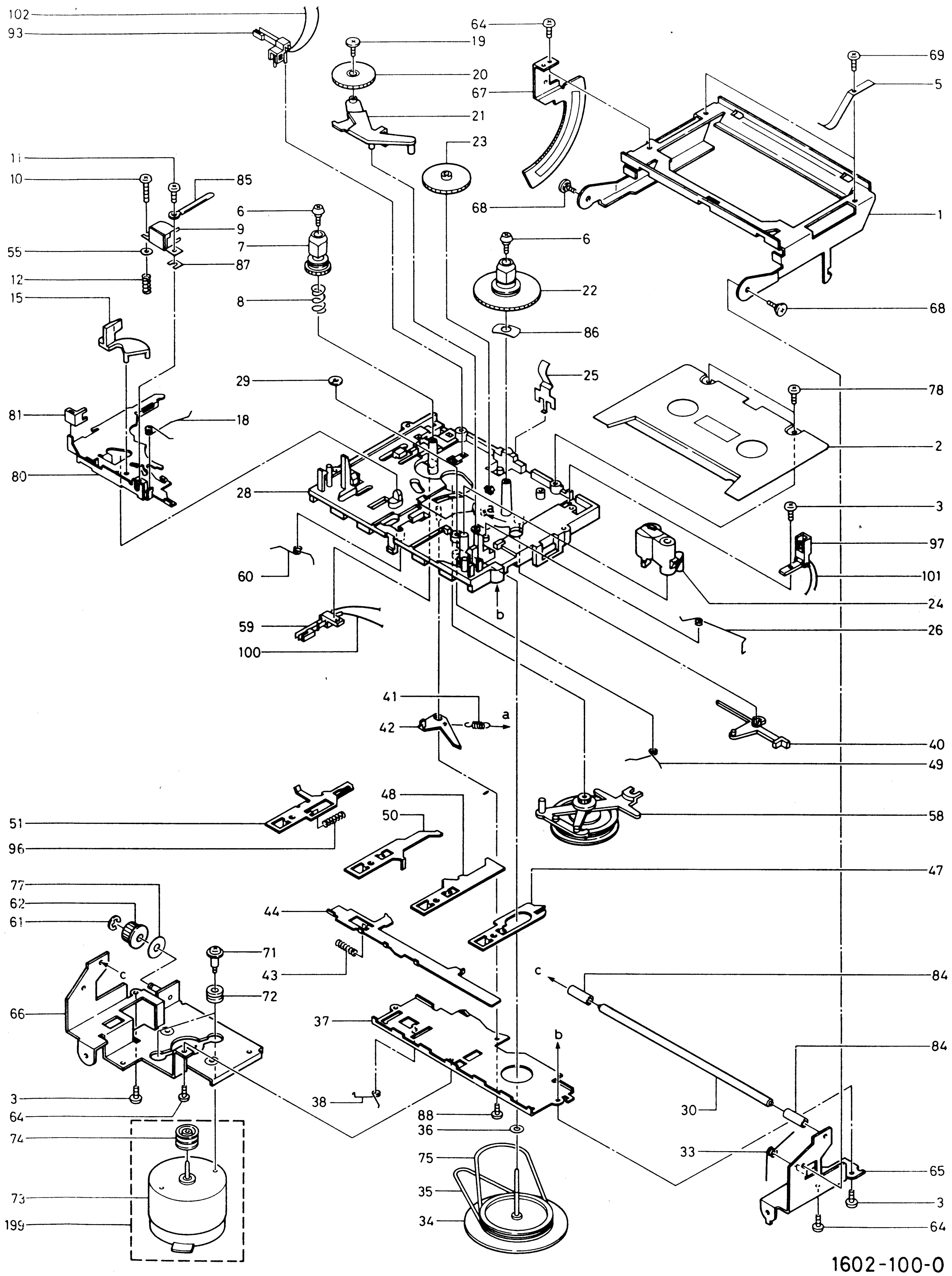
1602—502—1

MECHANISM SET EXPLODED VIEW (Play)


102
93
64
19
20
67
21
23
69
5
17
11
10
6
9
7
87
55
12
15
14
84
13
8
68
1
6
22
86
68
29
25
78
18
2
16
28
a
3
97
101
60
24
59
100
b
26
41
42
a
54
64
63
53
40
49
48
50
58
51
96
77
62
61
47
44
45
46
31
71
43
72
66
c
37
c
b
39
38
3
64
88
36
30
74
75
33
65
35
73
3
34
199
64

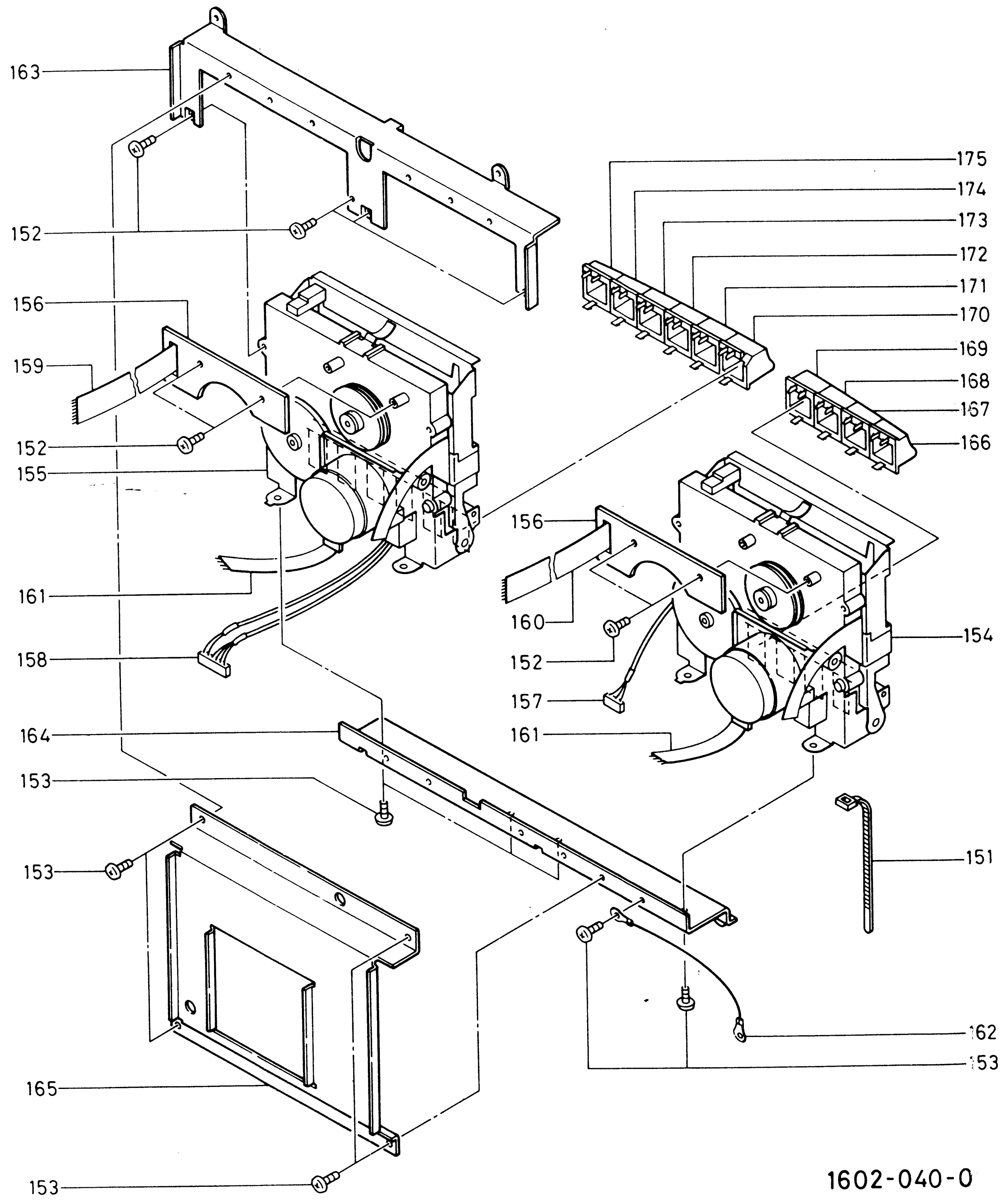
1602-101-0

MECHANISM SET EXPLODED VIEW (R/P)

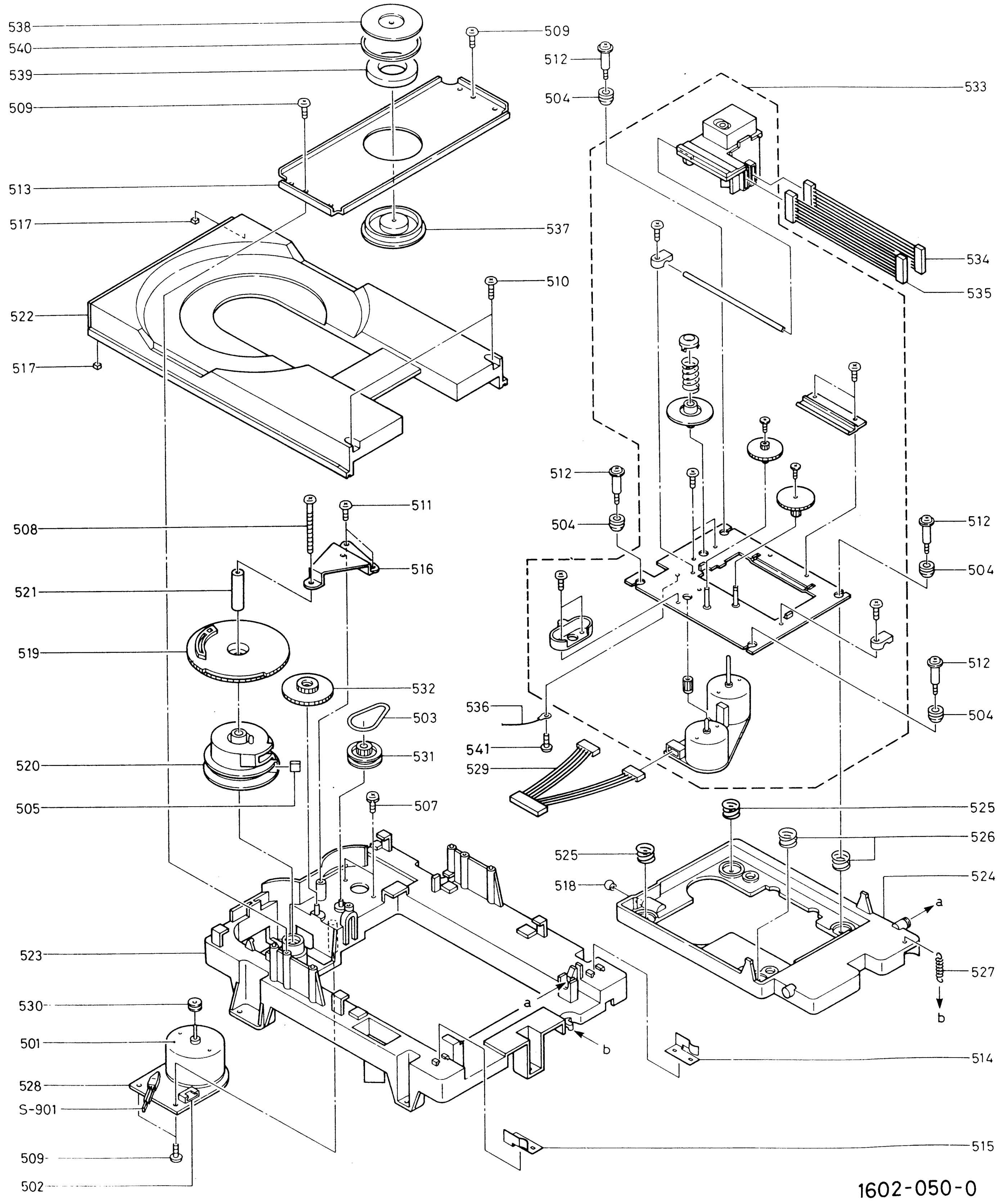

102
93
64
19
20
67
21
23
69
5
11
10
85
6
9
7
87
55
12
15
8
68
1
6
22
86
68
29
25
78
81
18
2
80
28
a
3
97
101
60
24
b
59
100
26
41
42
a
40
49
48
50
58
51
96
47
77
62
61
44
71
43
72
84
c
66
c
37
b
84
38
3
64
88
36
30
74
75
33
65
35
73
3
34
199
64

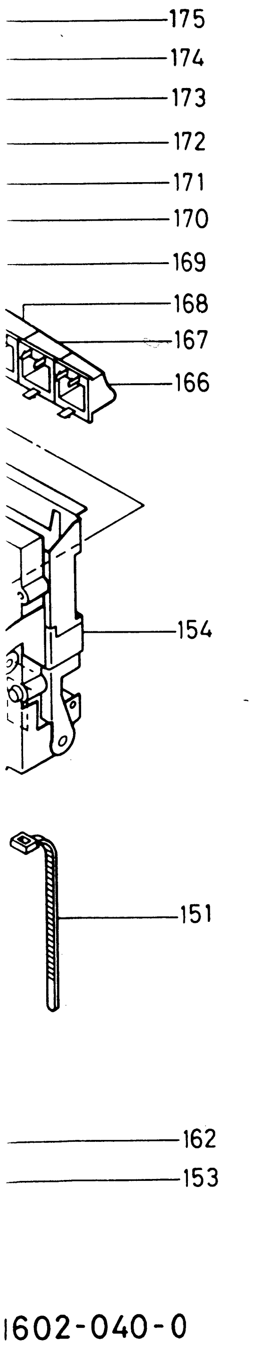
1602-100-0

MECHANISM UNIT EXPLODED VIEW

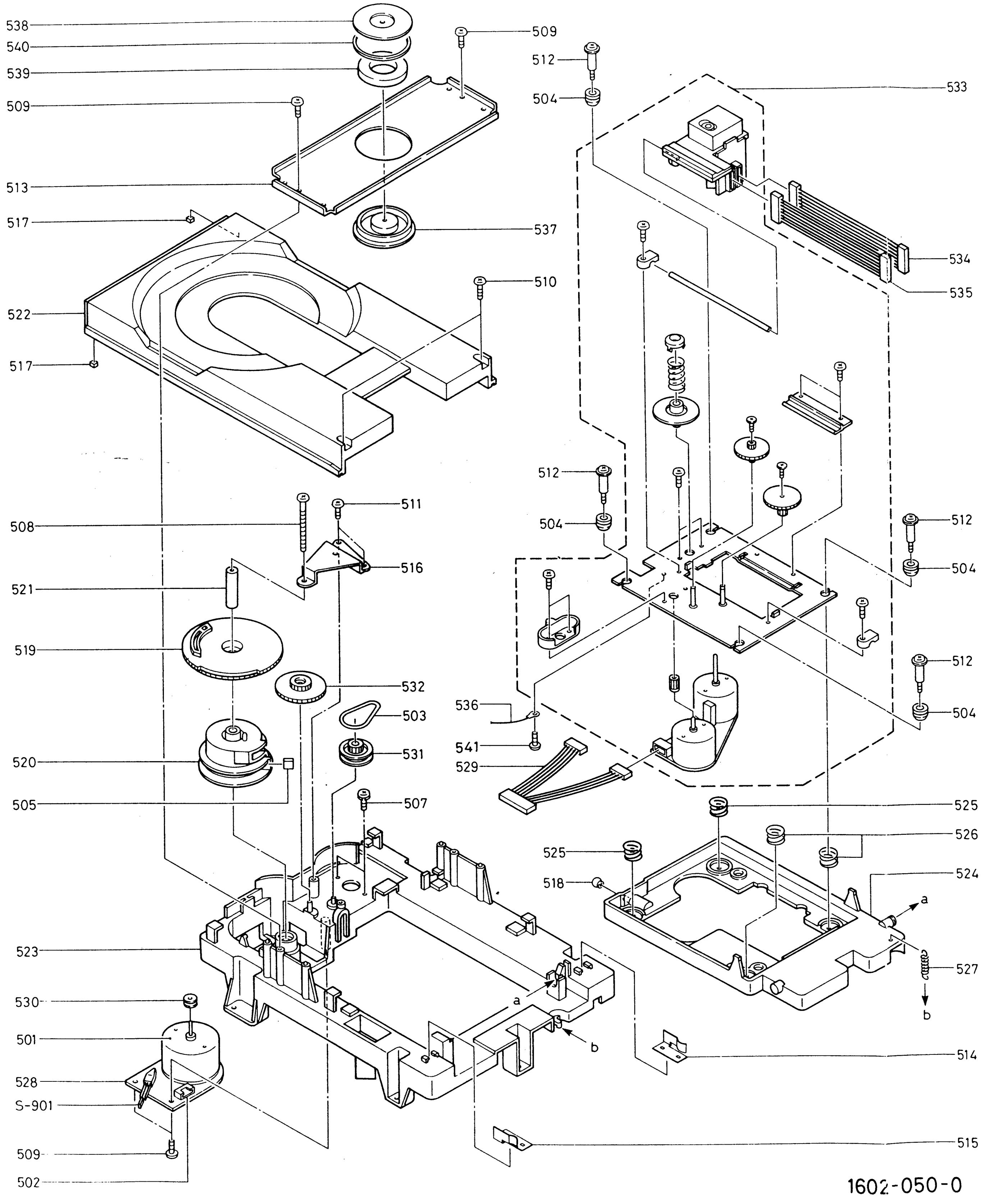

163
152
156
159
152
155
161
158
164
153
153
165
153
175
174
173
172
171
170
169
168
167
166
156
160
152
157
161
154
151
162
153
1602-040-0

CD MECHANISM UNIT EXPLODED VIEW


538
540
539
509
513
517
522
517
508
521
519
520
505
523
530
501
528
S-901
509
502
509
512
504
533
537
510
534
535
511
516
512
504
512
504
512
504
532
503
531
536
541
529
507
525
526
525
518
524
a
527
b
a
b
514
515
1602-050-0


175
174
173
172
171
170
169
168
167
166
154
151
162
153
1602-040-0

CD MECHANISM UNIT EXPLODED VIEW


538
540
539
509
513
517
522
517
508
521
519
520
505
523
530
501
528
S-901
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502
509
512
504
533
537
510
534
535
512
504
511
516
532
503
531
507
536
541
529
512
504
512
504
512
504
525
526
525
518
524
a
527
b
a
b
514
515
1602-050-0

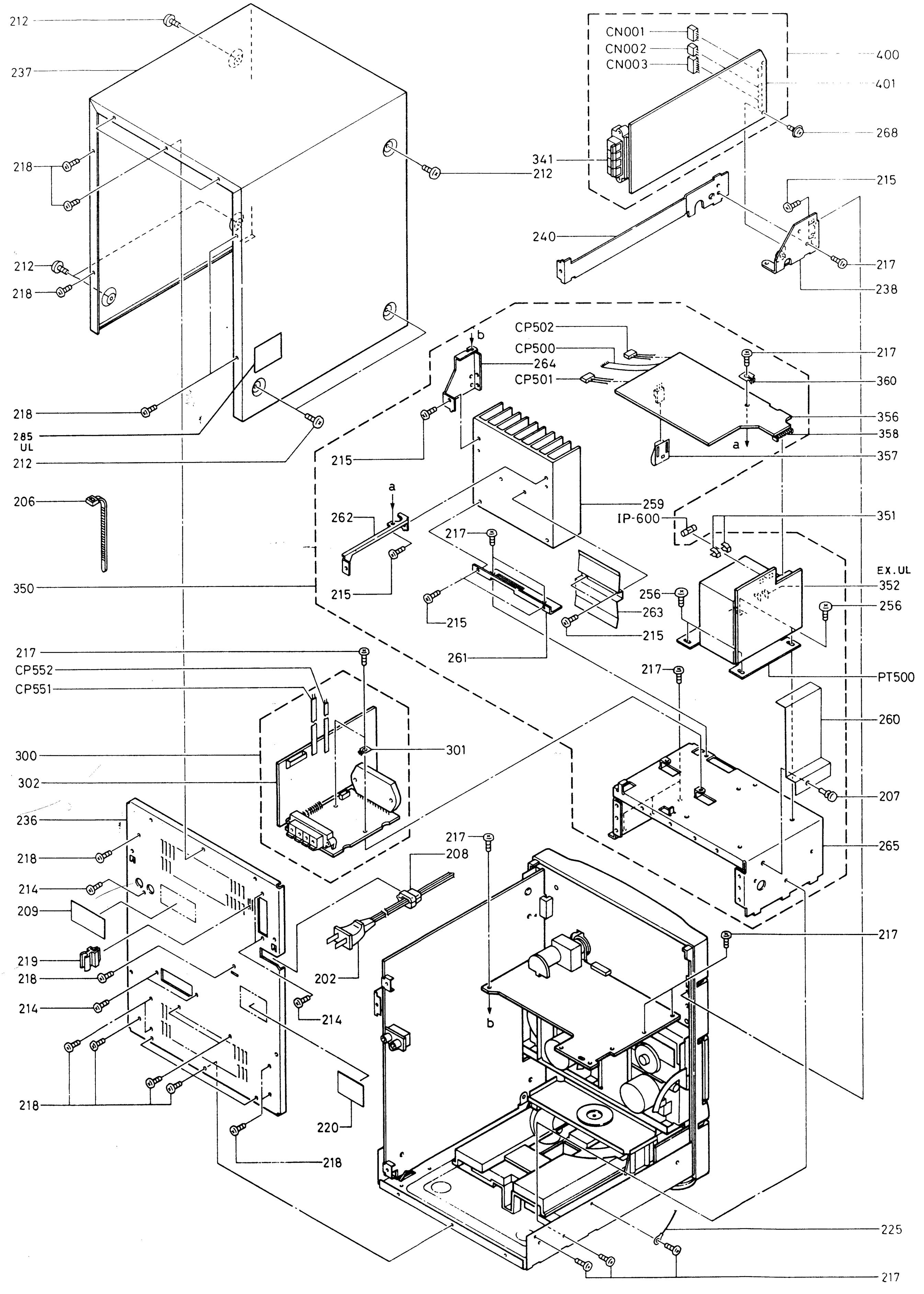
SCREWS LIST FOR ALL EXPLODED VIEW

3	D2.6 X 6	153	M3 X 6	508	D3 X 3.5
10	M2 X 8	212	M4 X 6	509	D2.6 X 8
11	M2 X 3	214	D3 X 8	510	D2.6 X 12
14	M2 X 6	215	D3 X 8	511	D3 X 8
64	M2 X 4	216	D2.6 X 6	541	M2 X 5
68	M2 X 3	217	M3 X 6		
69	M2 X 3	218	M3 X 6		
78	M2.6 X 6	268	M3 X 6		
95	M2.6 X 6	421	M3 X 6		
152	M2.6 X 8	507	D2.6 X 5		

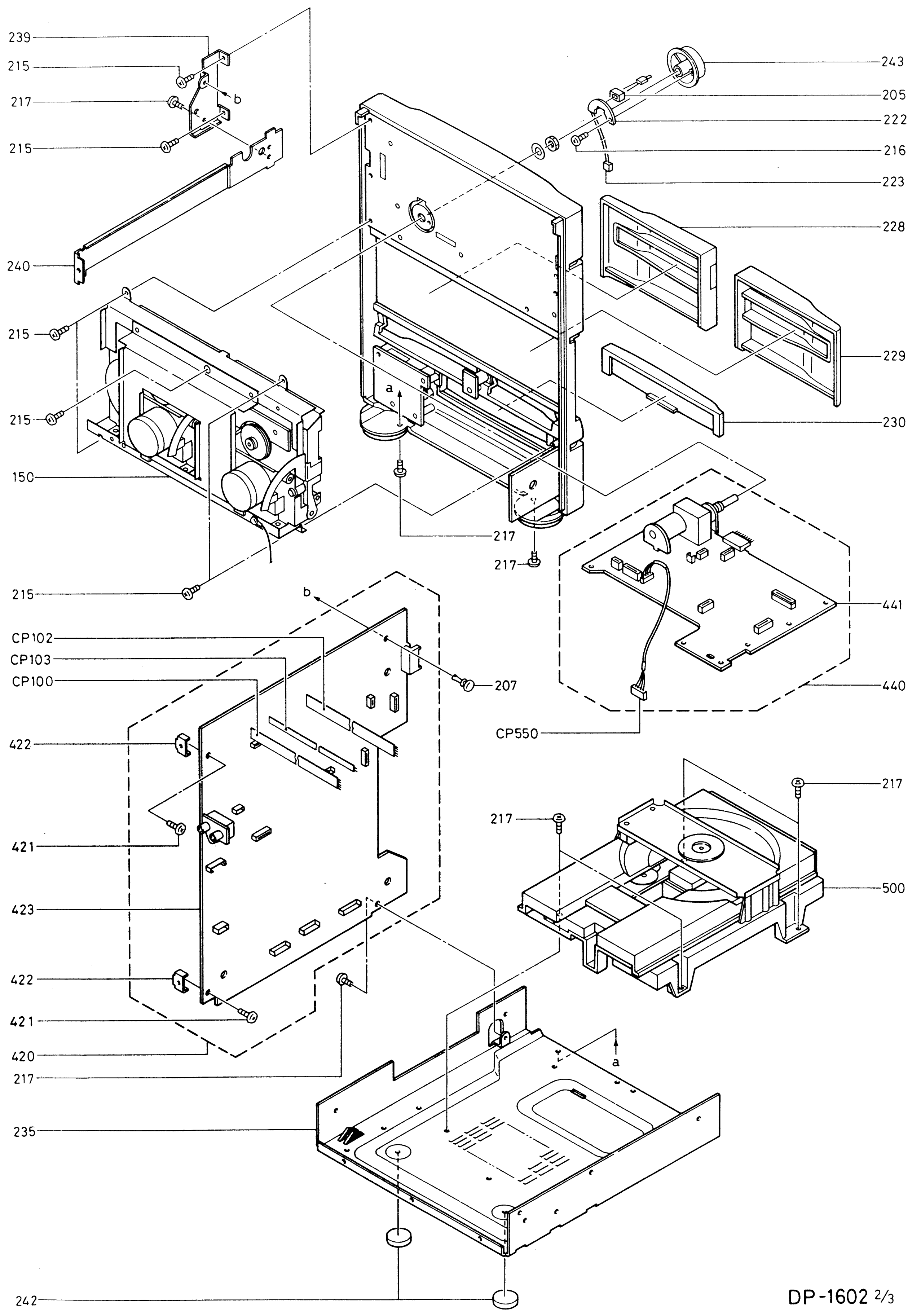
5	4822 466 93042	174	4822 410 61612
9	4822 249 10425	175	4822 410 61613
13	4822 249 40276	199	4822 361 21483
24	4822 402 61403	501	4822 418 40884
35	4822 358 31163	503	4822 498 20126
59	4822 278 90695	504	4822 466 62073
62	4822 522 33156	505	4822 466 93025
75	4822 358 31162	512	4822 502 13784
93	4822 277 30885	514	4822 256 91797
97	4822 278 90694	515	4822 256 91798
154	4822 691 20709	517	4822 466 62075
155	4822 691 20711	518	4822 528 70755
166	4822 410 61603	519	4822 522 33116
167	4822 410 61604	520	4822 402 61392
168	4822 410 61605	522	4822 466 93021
169	4822 410 61606	525	4822 492 52268
170	4822 410 61607	526	4822 492 52269
171	4822 410 61608	527	4822 492 70957
172	4822 410 61609	531	4822 522 33115
173	4822 410 61611	532	4822 522 33117
		533	4822 691 30268
		537	4822 492 70988
		540	4822 466 62074

Note : Only the mentioned parts are normal service parts.

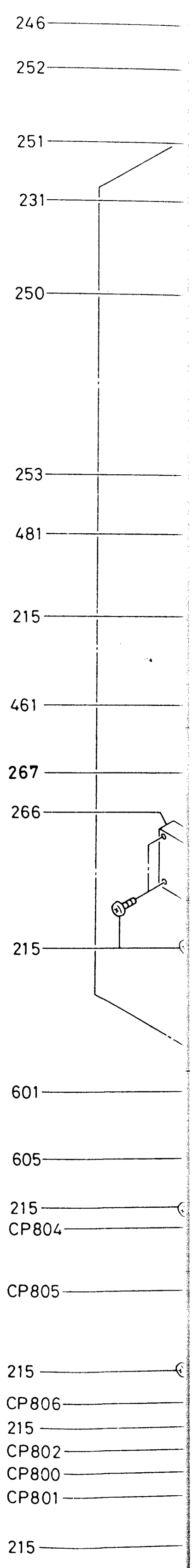
UNIT ASSEMBLY EXPLODED VIEW

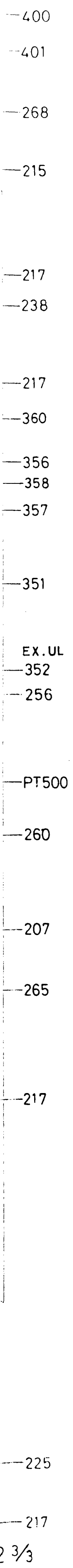

212
237
218
212
218
218
285
UL
212
206
350
217
CP552
CP551
300
302
236
218
214
209
219
218
214
218
218
220
202
214
208
217
b
225
217
CN001
CN002
CN003
400
401
268
341
212
215
240
217
238
CP502
CP500
264
CP501
b
217
360
356
358
a
357
215
a
262
259
IP-600
351
215
217
215
256
263
215
261
EX.UL
352
256
PT500
217
260
207
265
301
217

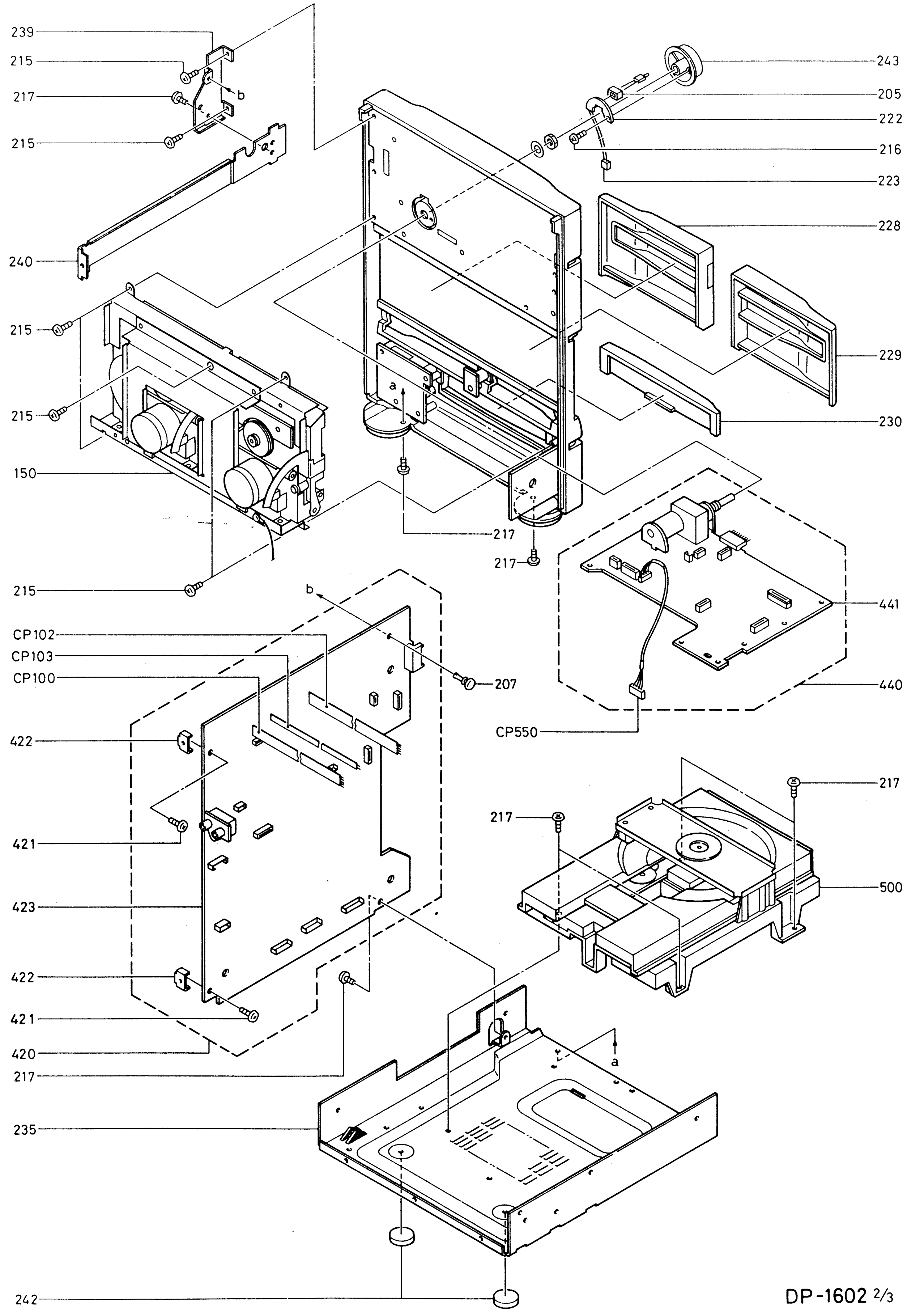
DP-1602 3/3


239
215
217
b
215
240
215
215
150
215
243
205
222
216
223
228
229
230
a
217
217
441
440
CP550
b
CP102
CP103
CP100
207
422
421
423
422
421
420
217
235
242
217
217
500
a

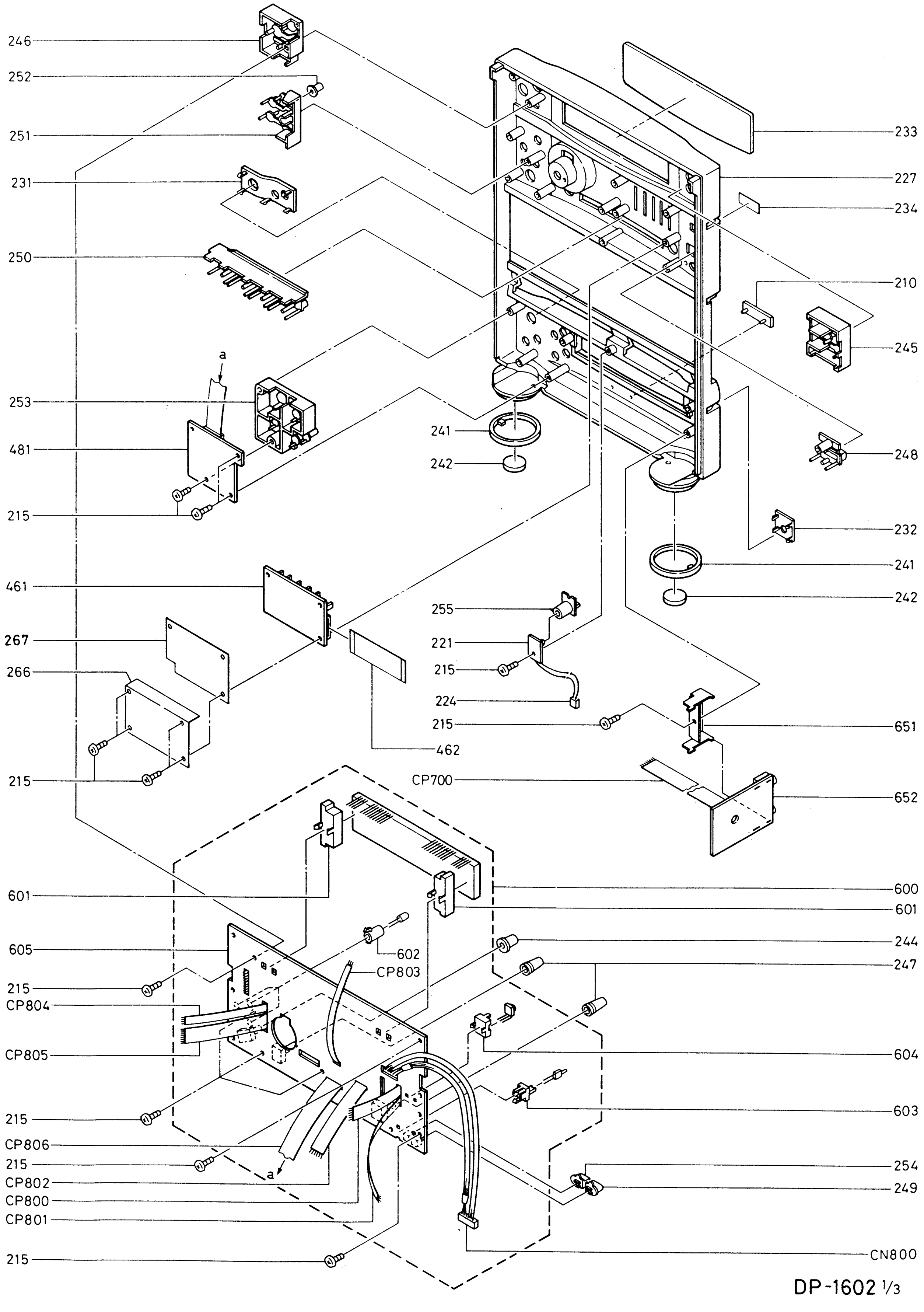
DP-1602 2/3


246
252
251
231
250
253
481
215
461
267
266
215
601
605
215
CP804
CP805
215
CP806
215
CP802
CP800
CP801
215

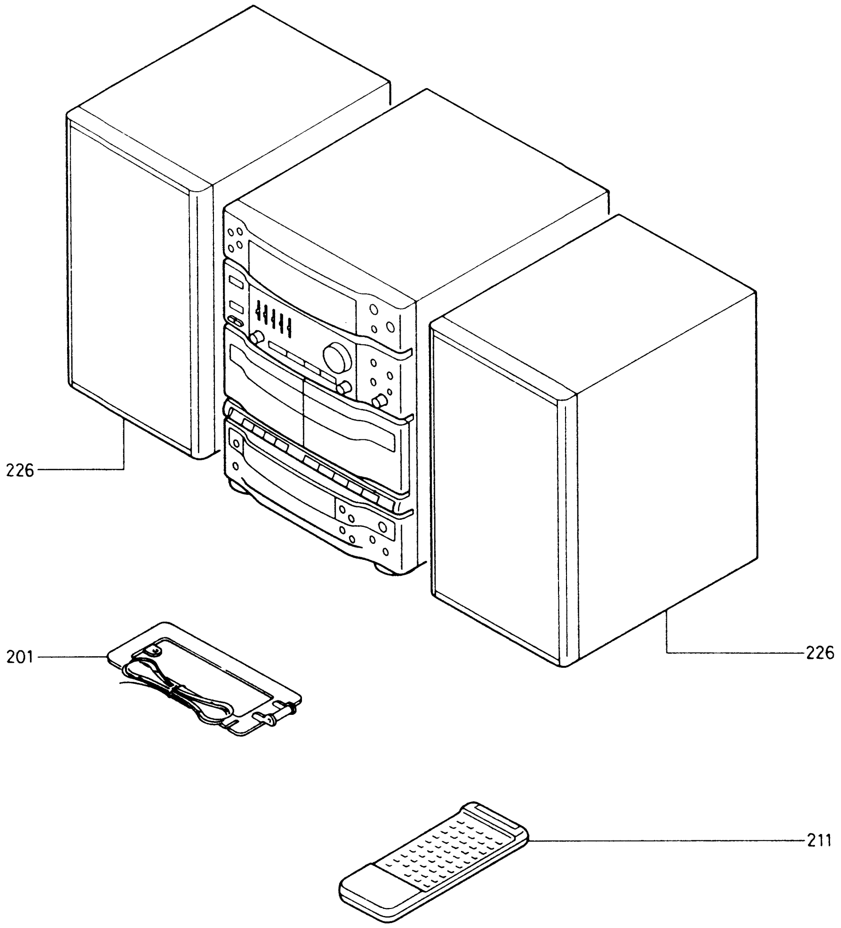

400
401
268
215
217
238
217
360
356
358
357
351
EX.UL
352
256
PT500
260
207
265
217
225
217
2 3/3


239
215
217
b
215
240
215
215
150
215
243
205
222
216
223
228
229
230
a
217
217
441
440
CP550
b
CP102
CP103
CP100
207
422
421
423
422
421
420
217
217
217
500
235
a
242

DP-1602 2/3


246
252
251
231
250
a
253
481
215
461
267
266
215
233
227
234
210
245
241
242
248
232
241
242
255
221
215
224
215
462
651
CP700
652
601
605
215
CP804
CP805
215
CP806
215
CP802
CP800
CP801
215
602
CP803
a
600
601
244
247
604
603
254
249
CN800

DP-1602 1/3



201	4822 303 30404	245	4822 413 51394
204	4822 466 93044	246	4822 413 51395
207	4822 535 30137	247	4822 413 51396
208	4822 528 40341	248	4822 410 61597
210	4822 459 11044	249	4822 410 61598
211	4822 218 10434	250	4822 411 61843
219	4822 404 21171	251	4822 410 61599
226	4822 445 10302	252	4822 462 71792
227	4822 423 41158	253	4822 410 61601
228	4822 443 63479	254	4822 410 61602
229	4822 443 63481	255	4822 380 20421
230	4822 444 50671	263	4822 256 91827
231	4822 444 50672	301	4822 466 82893
232	4822 444 50673	341	4822 290 61037
233	4822 450 61797	357	4822 255 41234
234	4822 450 61798	358	4822 267 51128
241	4822 462 71791	360	4822 466 82906
242	4822 462 41874	462	4822 321 61403
243	4822 413 51392	601	4822 404 60706
244	4822 413 51393	IFU	4822 736 21273

Note : Only the mentioned parts are normal service parts.

MISCELLANEOUS

BK560	4822 252 11113	⚠	CIRCUIT BREAKER
BK560'	4822 252 11113	⚠	CIRCUIT BREAKER
CB800	4822 265 41172		CONNECTOR 10P
CB801	4822 265 41173		CONNECTOR 10P
CF001	4822 242 80321		FILTER 10.7MHz
CF002	4822 242 80321		FILTER 10.7MHz
CF003	4822 242 80321		FILTER 10.7MHz
CF004	4822 242 80319		FILTER 450kHz
CF005	4822 242 80322		FILTER 450kHz
CF300	4822 242 80318		RESONATOR 4.19MHz
CF600	4822 242 81028		RESONATOR 3.58MHz
CN602	4822 265 41169		CONNECTOR 15P
CN603	4822 265 41171		CONNECTOR 15P
CN606	4822 265 41174		CONNECTOR PIN, 10P
CP101	4822 265 41175		CONNECTOR PIN, 10P
FL800	4822 130 91044		FLD DISPLAY
IP300	4822 252 20291	⚠	FUSE 0.4A 50V
IP301	4822 252 20291	⚠	FUSE 0.4A 50V
IP500	4822 130 82846	⚠	FUSE 1A 50V
IP501	4822 130 82846	⚠	FUSE 1A 50V
IP502	4822 130 82845	⚠	FUSE 0.6A 50V
IP503	4822 130 82845	⚠	FUSE 0.6A 50V
IP504	4822 130 82846	⚠	FUSE 1A 50V
IP600	4822 070 31002	⚠	FUSE 1AT 250V
IR800	4822 212 23834		RCR IS1U60L
J100	4822 265 20524		SOCKET LINE IN
J101	4822 267 31422		SOCKET HEADPHONE
J102	4822 267 31423		SOCKET MIC/MIX
RF001	4822 212 23774		RF MODULE
S800	4822 276 13178		DOLBY SWITCH
S801	4822 276 13178		DUBBING SWITCH
S802	4822 276 13132		TACT SWITCH
S803	4822 276 13132		TACT SWITCH
S804	4822 276 13132		TACT SWITCH
S805	4822 276 13132		TACT SWITCH
S806	4822 276 13132		TACT SWITCH
S807	4822 276 13132		TACT SWITCH
S808	4822 276 13132		TACT SWITCH
S809	4822 276 13132		TACT SWITCH
S810	4822 276 13132		TACT SWITCH
S811	4822 276 13132		TACT SWITCH
S812	4822 276 13132		TACT SWITCH
S813	4822 276 13132		TACT SWITCH
S814	4822 276 13132		TACT SWITCH
S815	4822 276 13132		TACT SWITCH
S816	4822 276 13132		TACT SWITCH
S817	4822 276 13132		TACT SWITCH
S818	4822 276 13132		TACT SWITCH
S819	4822 276 13132		TACT SWITCH
S820	4822 276 13132		TACT SWITCH
S821	4822 276 13132		TACT SWITCH
S822	4822 276 13132		TACT SWITCH

MISCELLANEOUS

S823	4822 276 13132		TACT SWITCH
S824	4822 276 13132		TACT SWITCH
S901	4822 278 90684		LEAF SWITCH MSW-1623
SF800	4822 242 81027		RESONATOR 4.19MHz
SP550	4822 267 31375		SPEAKER SOCKET
X001	4822 242 80328		X'TAL 7.2MHz
X300	4822 242 80327		X'TAL 16.9344MHz
X800	4822 242 81083		X'TAL 32.768kHZ

⊣⊢

C018	4822 126 11932		8pF 50V
C019	4822 126 11933		510pF 50V
C024	4822 126 11931		5pF 50V
C506	4822 124 42341	⚠	4700µF 25V
CT001	4822 125 50589		TRIMMER 30pF 100V
CT002	4822 125 50589		TRIMMER 30pF 100V
TC800	4822 125 50608		TRIMMER 30pF

▭

R131	4822 116 83475	⚠	3.3Ω 0.25W 5%
R145	4822 116 90783	⚠	100Ω 2W 5%
R337	4822 116 83473	⚠	10Ω 0.25W 5%
R357	4822 116 83541	⚠	47Ω 0.25W 5%
R358	4822 116 83541	⚠	47Ω 0.25W 5%
R359	4822 113 80581	⚠	22Ω 3W 5%
R360	4822 116 90783	⚠	100Ω 2W 5%
R500	4822 116 83476	⚠	0.33Ω 0.5W 5%
R501	4822 116 83476	⚠	0.33Ω 0.5W 5%
R502	4822 116 83473	⚠	10Ω 0.25W 5%
R512	4822 116 83473	⚠	10Ω 0.25W 5%
R518	4822 116 90783	⚠	100Ω 2W 5%
R559	4822 116 83474	⚠	100Ω 0.25W 5%
R566	4822 116 83474	⚠	100Ω 0.25W 5%
R566'	4822 116 83474	⚠	100Ω 0.25W 5%
R628	4822 116 90783	⚠	100Ω 2W 5%
R630	4822 116 83473	⚠	10Ω 0.25W 5%
R633	4822 116 83473	⚠	10Ω 0.25W 5%
R634	4822 116 83473	⚠	10Ω 0.25W 5%
RA800	4822 116 90781		22k X 4 0.5W 5%
RA801	4822 116 90781		22k X 4 0.5W 5%
VR1	4822 100 11568		TRIMMER 5k
VR100	4822 100 11848		TRIMMER 1k
VR101	4822 101 11156		TRIMMER 2k
VR102	4822 100 11848		TRIMMER 1k
VR103	4822 101 11156		TRIMMER 2k
VR104	4822 100 11767		TRIMMER 10k
VR105	4822 101 11157		TRIMMER 20k
VR200	4822 101 11157		TRIMMER 20k
VR200'	4822 101 11157		TRIMMER 20k

VR201	4822 101 11157	TRIMMER 20k
VR201'	4822 101 11157	TRIMMER 20k
VR202	4822 100 11767	TRIMMER 10k
VR202'	4822 100 11767	TRIMMER 10k
VR300	4822 101 11157	TRIMMER 20k
VR301	4822 101 11157	TRIMMER 20k
VR302	4822 101 11157	TRIMMER 20k
VR303	4822 101 11157	TRIMMER 20k
VR304	4822 101 11156	TRIMMER 2k
VR600	4822 100 11832	POTM W/MOTOR
VR651	4822 105 11098	SLIDE POTM
VR652	4822 105 11098	SLIDE POTM
VR653	4822 105 11098	SLIDE POTM
VR654	4822 105 11098	SLIDE POTM
VR655	4822 105 11098	SLIDE POTM
VR800	4822 100 11831	ROTARY POTM
VR801	4822 100 11828	ROTARY POTM
VR802	4822 100 11829	ROTARY POTM

L1	4822 157 63373	COIL 10μH
L2	4822 157 63373	COIL 10μH
L3	4822 157 63373	COIL 10μH
L4	4822 157 63374	COIL 100μH
L5	4822 157 63374	COIL 100μH
L6	4822 157 63374	COIL 100μH
L7	4822 157 63374	COIL 100μH
L8	4822 157 63374	COIL 100μH
L9	4822 157 63372	COIL-10
L10	4822 157 63371	COIL-10
L11	4822 157 63369	OSC COIL
L12	4822 157 63712	OSC COIL
L13	4822 157 63368	COIL 1mH
L200	4822 157 63363	TRAP COIL
L200'	4822 157 63363	TRAP COIL
L201	4822 157 63363	TRAP COIL
L201'	4822 157 63363	TRAP COIL
L202	4822 157 63367	COIL 5.6mH
L202'	4822 157 63367	COIL 5.6mH
LF001	4822 157 63365	LOW PASS FILTER
LF002	4822 157 63365	LOW PASS FILTER
PT500	4822 146 31027 ⚠	POWER TRANSFORMER
T001	4822 148 81184	FM IFT COIL
T002	4822 142 50162	AM IFT COIL
T100	4822 148 81211	OSC TRANS-8

D1	4822 130 81336	1SS131
D2	4822 130 81336	1SS131
D3	4822 130 82646	SVC333A
D4	4822 130 81336	1SS131
D5	4822 130 81336	1SS131
D6	4822 130 82646	SVC333A
D7	4822 130 81336	1SS131
D8	4822 130 81336	1SS131
D9	4822 130 81336	1SS131
D101	4822 130 82647	MPG06B
D102	4822 130 80992	1SS270
D103	4822 130 33861	1SS176
D104	4822 130 80992	1SS270
D105	4822 130 33861	1SS176
D106	4822 130 80992	1SS270
D107	4822 130 33861	1SS176
D108	4822 130 82842	SLR-55VC3F
D300	4822 130 33861	1SS176
D301	4822 130 80992	1SS270
D303	4822 130 33861	1SS176
D304	4822 130 80992	1SS270
D305	4822 130 33861	1SS176
D306	4822 130 80992	1SS270
D307	4822 130 32778	1SS133
D500	4822 130 80305 ⚠	KBU4D
D501	4822 130 82647	MPG06B
D502	4822 130 82647	MPG06B
D503	4822 130 80992	1SS270
D504	4822 130 82647	MPG06B
D505	4822 130 82647	MPG06B
D506	4822 130 32778	1SS133
D507	4822 130 82656	RD33ESB2
D508	4822 130 82838	RD12ESB2
D509	4822 130 82838	RD12ESB2
D510	4822 130 82837	RD7.5ESB2
D550	4822 130 50484 ⚠	GBPC602L-6398
D551	4822 130 80992	1SS270
D552	4822 130 82656	RD33ESB2
D553	4822 130 82839	RD13ESB2
D601	4822 130 33861	1SS176
D603	4822 130 80992	1SS270
D604	4822 130 32778	1SS133
D605	4822 130 82836	RD3.9ESB2
D650	4822 130 80992	1SS270
D651	4822 130 32778	1SS133
D800	4822 130 33861	1SS176
D801	4822 130 32778	1SS133
D802	4822 130 33861	1SS176
D803	4822 130 80793	RD9.1ESB2
D804	4822 130 80992	1SS270
D805	4822 130 32778	1SS133
D806	4822 130 33861	1SS176
D807	4822 130 80992	1SS270
D808	4822 130 32778	1SS133
D809	4822 130 80992	1SS270
D810	4822 130 32778	1SS133
D811	4822 130 33861	1SS176
D812	4822 130 82871	RD4.7ESB3
LD600	4822 130 82841	LT2P11G-81
LD600'	4822 130 82841	LT2P11G-81
LD800	4822 130 82873	LT2P21-81
LD801	4822 130 82872	SLR-55MHz 3F
LD802	4822 130 82872	SLR-55MHz 3F
LD803	4822 130 82872	SLR-55MHz 3F

IC1	4822 209 30178	LC7218
IC2	4822 209 30174	LA1265S
IC3	4822 209 71489	TA7343AP
IC100	4822 209 83315	LC7815
IC101	4822 209 30182	NJM4558L
IC102	4822 209 30182	NJM4558L
IC103	4822 209 71951	BA3416BL
IC104	4822 209 30176	HA12134A
IC105	4822 209 63132	BA7755A
IC106	4822 209 30177	LA3242
IC300	4822 209 63138	CXA1081M
IC301	4822 209 61381	CXA1082BQ
IC302	4822 209 82573	UPD4066BC
IC303	4822 209 30619 ⚠	TA7291S
IC304	4822 209 30608	UPD75108CW-C52
IC305	4822 209 30131	CXD1167Q
IC306	4822 209 30183	LC7883kM
IC307	4822 209 80401	NJM4558D
IC308	4822 209 80401	NJM4558D
IC309	4822 209 30171	μPC78M05H
IC310	4822 209 30614	μPC79M05H
IC500	4822 209 30616	M5230L
IC501	4822 209 30248	NJM78M56FA
IC502	4822 209 30615 ⚠	NJM78M15FA
IC550	4822 209 30175	STK4152-II
IC600	4822 209 71463	UPD4555BC
IC601	4822 209 30618	YM3428
IC602	4822 209 30613	LA3600
IC602'	4822 209 30613	LA3600
IC603	4822 209 30619	TA7291S
IC604	4822 209 30182	NJM4558L
IC605	4822 209 30182	NJM4558L
IC606	4822 209 80401	NJM4558D
IC607	4822 209 30182	NJM4558L
IC607'	4822 209 30182	NJM4558L
IC608	4822 209 80401	NJM4558D
IC609	4822 209 71901	NJM78L05A
IC700	4822 209 30182	NJM4558L
IC701	4822 209 30182	NJM4558L
IC800	4822 209 30184	S-80727AN
IC801	4822 209 30609	μPD75212ACW-A01
IC802	4822 209 30617	μPD74HC4052C

Q001	4822 130 42077	2SC2458-GR
Q002	4822 130 62779	2SC2785-EL
Q003	4822 130 42077	2SC2458-GR
Q004	4822 130 42077	2SC2458-GR
Q005	4822 130 62792	DTA143XS
Q006	4822 130 62792	DTA143XS
Q007	4822 130 62783	2SK519-H
Q008	4822 130 42077	2SC2458-GR
Q009	4822 130 62779	2SC2785-EL
Q010	4822 130 42077	2SC2458-GR
Q011	4822 130 62778	2SC380TM-O
Q012	4822 130 62778	2SC380TM-O
Q013	4822 130 62779	2SC2785-EL
Q014	4822 130 42077	2SC2458-GR
Q015	4822 130 62787	DTA114YS
Q016	4822 130 62503	DTC114YS
Q017	4822 130 62761	DTC363TS
Q018	4822 130 62761	DTC363TS
Q100	4822 130 62782	DTC114ESTP
Q101	4822 130 61189	DTA114TS
Q102	4822 130 62483	2SC1740S-S
Q103	4822 130 62782	DTC114ESTP
Q104	4822 130 62782	DTC114ESTP
Q105	4822 130 62782	DTC114ESTP
Q106	4822 130 62782	DTC114ESTP
Q107	4822 130 62787	DTA114YS
Q108	4822 130 62787	DTA114YS
Q109	4822 130 62782	DTC114ESTP
Q110	4822 130 62782	DTC114ESTP
Q111	4822 130 62782	DTC114ESTP
Q112	4822 130 62782	DTC114ESTP
Q113	4822 130 62512	2SC4040-Q
Q114	4822 130 62787	DTA114YS
Q115	4822 130 62512	2SC4040-Q
Q116	4822 130 62782	DTC114ESTP
Q117	4822 130 62782	DTC114ESTP
Q118	4822 130 62782	DTC114ESTP
Q119	4822 130 62782	DTC114ESTP
Q120	4822 130 62782	DTC114ESTP
Q121	4822 130 62782	DTC114ESTP
Q122	4822 130 62782	DTC114ESTP
Q123	4822 130 41521	2SD467-C
Q124	4822 130 41521	2SD467-C
Q125	4822 130 62787	DTA114YS

Q126	4822 130 62483	2SC1740S-S
Q127	4822 130 62483	2SC1740S-S
Q128	4822 130 62782	DTC114ESTP
Q129	4822 130 62782	DTC114ESTP
Q130	4822 130 62782	DTC114ESTP
Q131	4822 130 62782	DTC114ESTP
Q132	4822 130 62483	2SC1740S-S
Q133	4822 130 62758	2SA1048-GR
Q200	4822 130 62483	2SC1740S-S
Q200'	4822 130 62483	2SC1740S-S
Q201	4822 130 62761	DTC363TS
Q201'	4822 130 62761	DTC363TS
Q202	4822 130 62782	DTC114ESTP
Q202'	4822 130 62782	DTC114ESTP
Q203	4822 130 62782	DTC114ESTP
Q203'	4822 130 62782	DTC114ESTP
Q204	4822 130 62782	DTC114ESTP
Q204'	4822 130 62782	DTC114ESTP
Q205	4822 130 62782	DTC114ESTP
Q205'	4822 130 62782	DTC114ESTP
Q206	4822 130 62483	2SC1740S-S
Q206'	4822 130 62483	2SC1740S-S
Q207	4822 130 62784	2SJ103-Y
Q207'	4822 130 62784	2SJ103-Y
Q208	4822 130 62784	2SJ103-Y
Q208'	4822 130 62784	2SJ103-Y
Q209	4822 130 62761	DTC363TS
Q209'	4822 130 62761	DTC363TS
Q300	4822 130 62758	2SA1048-GR
Q301	4822 130 62512	2SC4040-Q
Q302	4822 130 62786	2SA1560-Q
Q303	4822 130 62512	2SC4040-Q
Q304	4822 130 62786	2SA1560-Q
Q305	4822 130 62512	2SC4040-Q
Q306	4822 130 62786	2SA1560-Q
Q307	4822 130 62512	2SC4040-Q
Q308	4822 130 62786	2SA1560-Q
Q309	4822 130 62781	DTC114TS
Q310	4822 130 62781	DTC114TS
Q311	4822 130 61189	DTA114TS
Q312	4822 130 62782	DTC114ESTP
Q400	5322 130 60898	2SC2878-B
Q400'	5322 130 60898	2SC2878-B
Q500	4822 130 62782	DTC114ESTP
Q501	4822 130 62548	2SB1185-F
Q502	4822 130 62549	2SD1762-F
Q503	4822 130 62905	2SB1243-Q
Q504	4822 130 62905	2SB1243-Q
Q505	4822 130 62782	DTC114ESTP
Q506	4822 130 61189	DTA114TS
Q507	4822 130 62781	DTC114TS
Q508	4822 130 62906	2SD1864-Q
Q509	4822 130 62549	2SD1762-F
Q510	4822 130 62548	2SB1185-F
Q550	4822 130 62782	DTC114ESTP
Q551	4822 130 62906	2SD1864-Q
Q552	4822 130 62906	2SD1864-Q
Q553	4822 130 62905	2SB1243-Q
Q554	4822 130 62782	DTC114ESTP
Q600	4822 130 62782	DTC114ESTP
Q601	4822 130 62782	DTC114ESTP
Q602	4822 130 62782	DTC114ESTP
Q603	4822 130 62782	DTC114ESTP
Q604	4822 130 62782	DTC114ESTP
Q605	4822 130 62782	DTC114ESTP
Q650	4822 130 62784	2SJ103-Y
Q650'	4822 130 62784	2SJ103-Y
Q651	4822 130 62904	2SC2878-A
Q651'	4822 130 62904	2SC2878-A
Q800	4822 130 61189	DTA114TS
Q801	4822 130 62782	DTC114ESTP
Q802	4822 130 62781	DTC114TS
Q803	4822 130 62907	DTA113ZS
Q804	4822 130 62781	DTC114TS
QA800	4822 209 30168	DT5A114E
QA801	4822 209 30169	DT5C124E

Note : Only the mentioned parts are normal service parts

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utiliseés les pièces de rechange identiques à celles spécifiées.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(D)

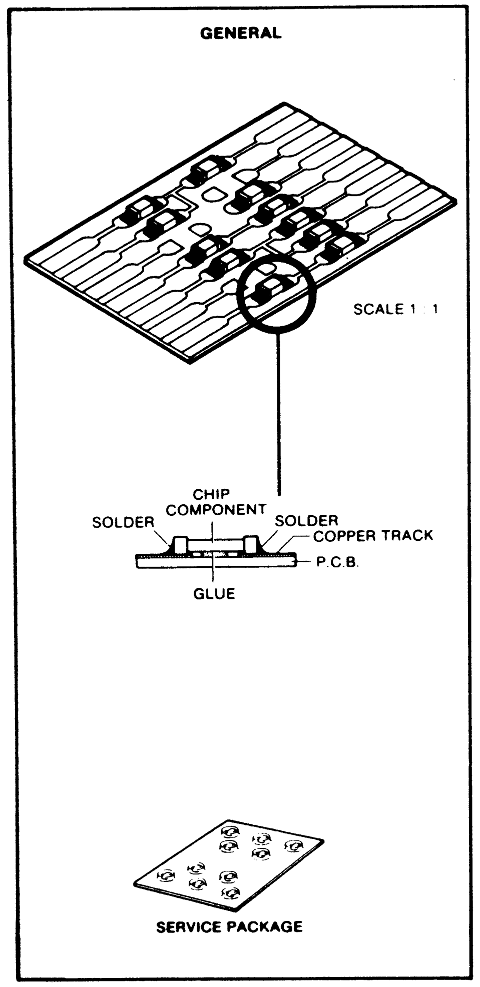
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

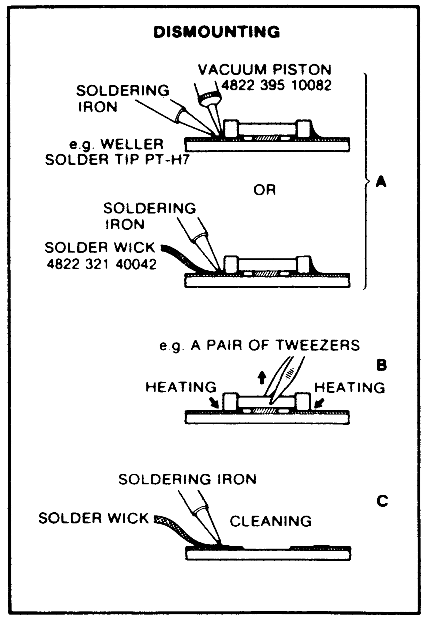
(I)

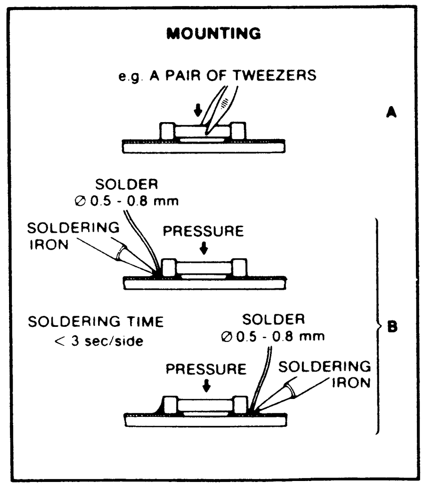
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

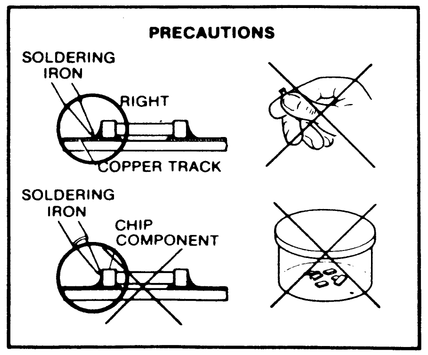
"After servicing and before returning set to customer perform a leakage current or resistive measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA".

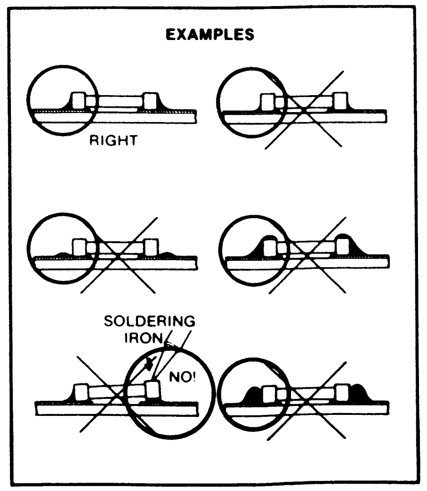
HANDLING CHIP COMPONENTS


GENERAL
SCALE 1 : 1
CHIP COMPONENT
SOLDER
SOLDER
COPPER TRACK
P.C.B.
GLUE
SERVICE PACKAGE


DISMOUNTING
SOLDERING IRON
VACUUM PISTON 4822 395 10082
e.g. WELLER SOLDER TIP PT-H7
OR
A
SOLDERING IRON
SOLDER WICK 4822 321 40042
e.g. A PAIR OF TWEEZERS
B
HEATING
HEATING
SOLDERING IRON
SOLDER WICK
CLEANING
C


MOUNTING
e.g. A PAIR OF TWEEZERS
A
SOLDER ∅ 0.5 - 0.8 mm
SOLDERING IRON
PRESSURE
SOLDERING TIME < 3 sec/side
SOLDER ∅ 0.5 - 0.8 mm
B
PRESSURE
SOLDERING IRON


PRECAUTIONS
SOLDERING IRON
RIGHT
COPPER TRACK
SOLDERING IRON
CHIP COMPONENT


EXAMPLES
RIGHT
SOLDERING IRON
NO!